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Iraq MH1

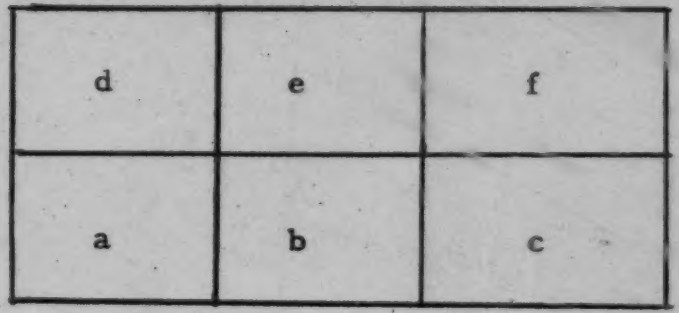
[For information on the topography, climate, agriculture and commercial crops, irrigation, stock raising, natural resources, production and supply, waterways, railways and roads of the valleys of the Tigris and Euphrates between the plateau of Asia Minor and the Persian Gulf discussed as one geographical unit rather than by political boundary, see M1 Middle East, Cat. 116, 21: Fisher, pp. 340-370.]

[For information on the topography, occupations and relative productivity of the desert plateau, and of the Arabian Peninsula as a whole, see M1 Middle East, cat. 116, 21: Fisher, pp. 427-449.]

1: Longrigg
496, 315, 631

MH1 Iraq MH1

The map following page 436 has been reproduced according to the following schedule:



1: Longrigg G-4, 5 (ca. 1915-1940) MH1 Iraq MH1

The railways when at their greatest extent they were handed over by the Army in April 1920, consisted of nearly 1,000 miles of track.[1] The absorption into the 'Iraq economy of this rapidly constructed and ill-equipped system, with its decrepit engines and rolling-stock and an alignment designed to serve military purposes, was to be no easy task. The Director in 1919–20 was Colonel G. Lubbock. The labour which the Railway used was, at this stage, almost entirely Indian.

The financial procedures for handing over to a Civil Administration the capital works constructed from Army funds were the subject of a mission sent to 'Iraq under Sir John Hewitt; the assets were valued at £2 million, excluding the Railway, and had mostly taken forms unrelated to civilian needs. The giant river fleet of the (military) Inland Water Transport, on the other hand, was never transferred to the Administration nor were its units sold locally by auction, as was the great mass of unneeded military stores. They were instead, amid storms of protest from the Civil Commissioner and 'Iraqi and British commercial interests, disposed of at Bombay by Lord Inchcape on behalf of the British Government. The civilian Tigris fleet was thereafter by degrees reduced to its pre-war scale. The Lynch (Euphrates and Tigris) Company had lost the *Julnar* and some minor craft, but in 1920 acquired the imposing *Zenobia* and *Zobaida* (both built in 1916), modernized its equipment and installations, and retained in operation the veteran *Blosse Lynch*, *Khalifa*, *Mejidieh*, and the *Malamir* from their pre-war Karun service. The Lynch management of the E.T.S.N. Company's fleet was after 1919 merged in a fusion of their interests with those of Messrs. Gray Mackenzie & Co., forming the Mesopotamia–Persia Corporation—'Mespers'—at Baghdad and Baṣra. Local competition on the river was no longer Government-organized, and most of the pre-war vessels had disappeared;[2] but it still handled an appreciable share of the traffic.

In the provincial Government, a close approximation to the Turkish administrative units was retained. The Division represented usually the former sanjaq or liwā, and the District the qaḍhā, while the naḥiyas were little changed. The sixteen Divisions

[1] The mileages of metre-gauge line were: Baghdad–Baṣra 352 miles, Baghdad–Persian frontier 130, Baghdad–Kut 158, Zubayr–Jabal Sanam 23, Ur–Naṣiriya 10, Qaraghan (on the Khaniqin line) to Kinqarban (outside Kifri) 23, with 36 miles in the port area of Baṣra and Ma'qil. The standard-gauge line, Baghdad–Sharqaṭ, was of 186 miles; the narrow-gauge, Baghdad–Kifl 21, and Baghdad–Faluja 38.

[2] The *Baghdadi*, Asfar's *Étoile de l'Orient*, the *Furat*, the *Risafa*, and a number of German-owned launches of the Société de Transports Fluviaux, had been sunk by the Turks to block waterways and impede British operations. The *Basra* was sent to Europe but did not get farther than Malta. The *Barhaniya* and *Hamidiya* were blown up by the Turks to avoid capture. The *Baghdad* reached Mosul—the first steamer to do so—and was there captured by the British.

1: Longrigg G-4, 5 (ca. 1915-1940) MH1 Iraq MH1

reconstructed, offices multiplied, and a mid-desert wireless-station was installed at Ruṭba.[1]

Tigris river navigation did not, and was unlikely to, exceed substantially its pre-1914 scale. The pace was slow, navigation difficult and the Railway in powerful rivalry. The 'Euphrates and Tigris' fleet, managed by 'Mespers', still handled the bulk of the traffic, with its three ancient and two modern paddle-steamers (p. 111). These were increased in 1924 by the acquisition of two stern-wheelers, the *Kadri* and the *Ihsan* both built in 1918, and of the 1908-built *Baghdad*, originally owned by the Idara Nahriya. These three had belonged to the long-established Khudhayri company which was absorbed by 'Euphrates and Tigris' in 1924. A few other Khudhayri boats remained in commission, and the Royal Air Force maintained both the Inland Water Transport dockyard at Baṣra and a few vessels for their own supplies. The Port of Baṣra, administered by J. C. Ward as Port Director under the Finance Ministry of the 'Iraq Government since 1920, was still in 1926 owned by the British Government pending completion of capital repayment by instalments and the creation of a Port Trust. From 1922 onwards the Port was organized on a permanent and self-supporting peace-time basis and supplied all normal facilities both for 'Iraqi trade and for the oil-tanker fleet of Abadan. In 1923 it undertook, by a loan from the Anglo-Persian Oil Company, the dredging of a deep channel through the Fao bar which before 1920 was impassable at high water by any ship drawing more than 20 feet. The agreement provided for a channel of 28-foot depth at high water and 300-foot width, and 12 miles long. Work began in 1924, and the Rooka Channel of these dimensions was opened for traffic in 1926.

The status of 'Iraq Railways, directed by J. R. Tainsh since 1921, was similar to that of the Port: they were British-owned and after 1923 'Iraqi-administered with the aid of British executives and technicians, in anticipation of future purchase and adjustment. The Baṣra–Baghdad line was reopened in April 1921, and thereafter a Musaiyib–Karbalā extension, a line from Mafraq to the Hindiya Barrage and spurs giving access to Khaniqin and to Baṣra city were completed between 1921 and 1924. The Kut–Baghdad line, the Jabal Sanam quarry line south of Zubayr, and that from near Khaniqin to the Persian frontier at Tiaruq (Qurait) were closed in the same period. Permanent bridges were built in 1924 and 1925 at the Euphrates crossings and an extension from the Khaniqin line across the Diyalā to Kifri and Kirkuk was finished in 1925. The main workshops were brought from Shu'ayba to Shalchiya, in the western outskirts of Baghdad, in the same year. The Tigris wagon-ferry link at Baghdad between the

1: Longrigg G-4, 5 (ca. 1915-1940) MH1 Iraq MH1

two-metre-gauge systems (Baghdad–Baṣra and Baghdad–Kirkuk) remained a source of delay and trouble, and the floods of 1926 destroyed much railway property. But the reopening of Persian pilgrim traffic after 1924 brought welcome revenue to the railway. The Indian labour disappeared in thousands year by year, replaced by 'Iraqis.

Industry in modern guise was slow to appear. Cotton-ginning and mechanical transport maintenance, ancillary to other forms of enterprise, have been mentioned. Of modern manufacture there was none, though various possibilities were often discussed. The future source, however, of the country's greatest single enterprise and wealth advanced during these years from the conference-room into the open: mineral oil.

The Turco-Persian Frontier Commission of 1913–14 had allotted to Turkey, and therefore ultimately to 'Iraq, the western half of the Naftkhana border area south of Khaniqin; and the Turkish, and thus by inheritance the 'Iraqi, Government had accepted that this Transferred Territory should be treated as still included in the grant made to D'Arcy in 1901. Negotiations on this basis between the Anglo-Persian Company and the 'Iraqi Ministry of Works were concluded in 1925, and later reopened to produce a revised and modernized agreement in May 1926. Drilling had early located a producing well, followed by others, and it was decided to convey the crude oil by pipeline the twenty-mile distance to Khaniqin. The refinery which, with Government encouragement, the Company decided to erect at Alwand outside the town, but still within the Transferred Territory, was begun in June 1926. 'Iraq seemed thus assured of its own petroleum supply, with all the importance of this to mechanical transport, pump-irrigation, and perhaps future industries.

The Vizirial promise given to the Turkish Petroleum Company on 28 June 1914 had in the seven years following been first doubted but later affirmed by the Foreign Office. It was questioned but later accepted by the French who in 1920, under the Cadman–Berthelot agreement at San Remo, inherited the Deutsche Bank's 25 per cent. shareholding in the Company; and it was viewed askance by the Americans who demanded an Open Door to 'Iraqi development with no complication of old unratified promises. This diplomatic obstacle was removed by the allotment of half the Anglo-Persian share to a group of American companies by an agreement reached in principle in 1923, but not implemented formally until 1928. Thus the shares of the Company in its final form were held as to 5 per cent. as ever by Mr. Gulbenkian, and as to 95 per cent. equally between the Shell Group (as the Anglo-Saxon Petroleum Company), the Anglo-Persian (as the

1: Longrigg G-4, 5 (ca. 1915-1940) MH1 Iraq MH1

were decked for road traffic, passable tracks were pushed far into the Kurdish hills. A 900-foot steel bridge over the Euphrates at Faluja was begun by British contractors, Messrs. Balfour, Beatty & Co., in 1927 and, after interruption by floods and a law case, completed in 1932. Permanent steel bridges across the Tigris at Baghdad and at Mosul were planned, and the latter well begun in 1932. A significant project was the road begun in 1927, and after remarkable engineering feats completed five years later, to connect the 'Iraqi system at Arbil with that of Adharbayjan at Tabriz. The 'Iraqi section, first used by experimental convoys in 1931, passed through the fabulous Rawanduz Gorge and was completed by the Persian section to the shores of Lake Urmiya; but its power to divert the Tabriz trade from Batum or Trebizond to Baghdad was doubtful. The close of the period saw the increased use of a direct Baghdad–'Amman route, and the first experiments in developing a pilgrim highway from Najf to Madina.

The Tigris steamers operated by the Lynch Company and their local competitors doubtfully held their own against rail, air, and road competition, and had little scope for development. The veteran *Blosse Lynch* and the *Baghdad* were sold as scrap in 1927, *Mejidieh* in 1928, and two R.A.F.-owned steamers, the *S.*16 and *S.*14 were acquired in 1927 by the Euphrates Company, to be renamed *Blosse Lynch* and *Mejidieh*; they were joined by the *Tigris* in the same year. The *Zobaida* ceased to be in commission after 1929. At Basra Port the bar-dredging operations at Fao, provisionally completed in 1926, were carried further in 1928–30. They resulted in a dredged channel—the Rooka—giving 30 instead of 28 feet of water at high tide (as compared with 20 feet in 1920) and easier movement over the inner bar. The bulk of the Port traffic consisted, as ever, of oil tankers proceeding to and from Abadan, but the Shaṭṭ was used regularly also by the Strick, British India, City, and other British lines, by the (German) Hansa Line and by an occasional ship of the U.S.S.R. or of Sweden. The new Port headquarters ranked among 'Iraq's most imposing buildings. The dredging loan of £460,000 from the Anglo-Persian had soon been repaid, and substitution of 'Iraqi for British and Indian personnel continued. Colonel Ward's Port administration, grouped as a department under Finance, was normally prosperous though badly afflicted by the slump of the years 1929 to 1932. It continued to pay to Great Britain the annual instalments fixed in 1922 as the cost of acquisition, but formation of the Port Trust then envisaged, and again provided in the 1930 Treaty, was not yet in sight.

The history of 'Iraq Railways was at this period uneventful. Their status as between British ownership and 'Iraq Government

1: Longrigg G-4, 5 (ca. 1916-1940) MH1 Iraq MH1

operation under Tainsh was uneasy, but in practice tolerable; the transfer of ownership to a Railway Corporation of Anglo-'Iraqi membership was, as with the Port of Baṣra, provided in the 1930 Treaty. The service and maintenance of the 750 miles of line were hampered by abiding financial stringency due normally to road competition and the uncertainty of the pilgrim traffic, and abnormally to flood interruptions such as those of 1926 and 1930 and to the stagnation of trade in 1929–32. Two lines of railway development were followed, both of international interest: the first was the provision in 1930 of a link by motor convoy between Kirkuk and the Turkish railway at Nisibin, making possible direct bookings from Baṣra to Europe: the second was the prosecution in 1930–1 of the survey for a Baghdad–Haifa line—a project widely supported but destined, twenty years later, to be still as far from realization.

'Iraq's fortune was that of many contemporary nations in the rapid development of its air routes. A weekly mail service Baṣra–Baghdad–Cairo was inaugurated early in 1927, to be followed two years later by the England–'Iraq–India service of Imperial Airways. In the same year a first civil airport was ceded by the R.A.F., and the (German) Junkers Company initiated, but failed to sustain, a Baghdad–Teheran service. Soon afterwards aircraft of the (French) Air Union or Air France appeared, and those of the Royal Dutch (K.L.M.) line; 'Iraq's central position for air communications—the 'Clapham Junction' rôle asserted for it by Mr. Churchill in 1921—was fast revealing itself. A modern-equipped airport immediately outside Baghdad begun in 1931 was completed in two years, and civil landing-grounds were in use also at Baṣra, Ur, Ruṭba, and elsewhere.

The effect of the trans-desert route and the increasing east–west air services on postal communications was profound. Both were used as they came into being for letters, the former also for packages; communications with Europe and India were revolutionized. In 1929 'Iraq joined the International Postal Union. With the constant spread of the telegraph and trunk telephone network within 'Iraq went the increasing use of wireless. The Baṣra station already communicated directly with Europe; those of Ruṭba and Baghdad were ancillary to it.

If the uplifting of 'Iraqi standards of life could be assisted indirectly by these improvements, it must be sought more directly in the development of its old and some new resources. The efforts of the public and Government were active in this direction. No minerals, other than petroleum, were located. The Government salt monopoly could do no more than maintain itself. A gold concession granted in 1931 for the mid-desert Qa'ara Depression, near

1: Longrigg G-4, 5 (ca. 1915-1940) MH1 Iraq MH1

appointingly, carried little traffic other than some oil supplies to northern Persia. Following completion of the great Faluja bridge (p. 208) other steel bridges were constructed: on the Lesser Zab at Altun Kupri, the Greater Zab at Aski Kellek, and elsewhere. In Baghdad the replacement of the two pontoon crossings by permanent steel bridges was at last decided, and contracts were awarded to Messrs. Holloway Bros. in 1936, a major step in the development of the capital. The new spans of the Mosul bridge were finished. Municipal street-making proceeded everywhere, and not least in Baghdad.

Little changed in the field of Tigris river navigation. Fears that the Kut barrage would make steamship navigation impossible were aroused but could be allayed; a move made in 1934 by local rivals to question the rights of the Euphrates and Tigris Company led to nothing. River traffic on the whole diminished. The *Zobaida* was sold to India in 1935, the *Blosse Lynch* and *Tigris* as scrap in the same year and the *Khalifa* in 1937. In 1936 the Mesopotamia–Persia Corporation split again into its original components, the Lynch Company and Messrs. Gray Mackenzie. Four small gunboats were acquired by Government in 1937 for riverain police work, but were little used. The Port of Baṣra rendered steady service to the country. Its volume of traffic permitted it to pay regularly its capital instalments to the British Government, and by 1937 a debt of only £300,000 remained. The Port Trust, to be set up under the 1930 Treaty, did not appear; the Port was still administered by a Directorate under the Ministry of Finance. Its bar-dredging scheme operated with great success, repaid its loans, and kept open and improved the deep channel.[1] Two new dredgers were acquired. The Port administration completed a modern airport at Baṣra, furnished with a hotel and all facilities, and provided Baṣra city and suburbs with electric power and a modern water-supply. The ocean traffic using the Port increased substantially after 1935: first two, and later four, Japanese lines appeared, with one each of German, Indian, and Italian ownership and an occasional Russian, Swedish, and Greek steamer. The great bulk of the tonnage remained, as of old, British and British-Indian.

The 'Iraq Railways maintained their solvency and functions in spite of tribal interference, fluctuating traffic, largely obsolescent equipment, and serious road competition. The operation of the system was modernized as far as was practicable, and a rapid Baghdad–Baṣra daily service introduced. Negotiations with the

[1] The low-water depths in the Rooka channel (p. 208), achieved by successive phases of the bar-dredging scheme, were in 1926, 18 ft., in 1928–9, 20 ft., in 1935–8, 23 or 24 ft.

1: Longrigg G-4, 5 (ca. 1915-1940) MH1 Iraq MH1

British Government on the terms of transfer of railway ownership, as intended in the Treaty, were prolonged from 1932 to 1936. In the latter year agreement was reached; the railway as a going concern became the property of the 'Iraq Government for a payment of less than £500,000. Management was for twenty years to be the responsibility of a joint Board with 'Iraqi majority, and with British executives remaining in a few key posts. The transfer on these terms was ratified by Parliament in July 1936, not without some minority outcry; and one more controversy was laid to rest. The long-advocated project of a Baghdad–Haifa railway was, for the foreseeable future, rejected in the same year. But development northwards had become rather a certainty than a project when late in 1934 the French authorities extended the (Turkish) Aleppo–Nisibin line across the Syrian 'Bec de canard' to the 'Iraq frontier at Tall Kochek. Only the single gap Bayji–Mosul–Tall Kochek, all in 'Iraq, now remained in a complete Baṣra–Baghdad–Istanbul system—the old dream of the Bagdadbahn. The decision to construct the missing section at a cost of some £2 million was taken by the Government in November 1936; and the orders placed forthwith in Great Britain for material compelled the 'Iraq Treasury to incur its first foreign loan (p. 254). Earth-work began, the northern section being given priority amid the eager interest of the Mosulawis, the Shammar, and the frontier qaḍhās.

Air communications developed fast. British, French, and Dutch trans-continental lines crossed and served 'Iraq with increasing frequency of aircraft, linking the Far East, India, and 'Iraq itself to the Levant and Europe. Modern airports with full equipment came into being at Baghdad and Baṣra, and British flying-boats after 1937 used also Lake Ḥabbaniya and the Shaṭṭ al-'Arab. A French line offered a shuttle connexion between Baghdad and Damascus, and Misr Airways a Baghdad–Cairo service. Interested Baghdadis formed an Aeroplane Society in 1936. Civil aviation was in 1935, surprisingly, transferred to the control of the Ministry of Defence. The simultaneous development of telegraphs by land line and wireless to the Levant capitals and Cairo, with public services from Baghdad and Baṣra to Riyadh, Beirut, Palestine, and Egypt—and through them to the United Kingdom—placed and kept 'Iraq in the world network of telecommunications. Broadcasting from Baghdad made its first appearance, but was up to 1937 still experimental and occasional.

Good progress was made during these five years in the all-important sphere of land settlement. The three Committees set up under the legislation which followed the Dowson Report worked excellently, and a fourth was added for the Kirkuk area in 1933 and others later. The settlement carried out by these Committees and

1: Longrigg G-4, 5 (ca. 1915-1940) MH1 Iraq MH1

to ensure Arab rights in the Holy Land, or by that of the Foreign Minister 'Ali Jawdat to Sa'udi Arabia in June.

The child-King was taken to the Lebanon for the summer, and there hailed by village enthusiasts by the roadside as 'King of Syria'. In Baghdad a new British Ambassador, Sir Basil Newton, to whom the Middle East and its problems were unfamiliar, succeeded Peterson in March 1939.

The financial needs of the State, which thanks to over-spending were now serious, were met by a grant of credits by the British Government for the pressing needs of the Railway, and equipment for the Army. Nearly £4 million was thus made available on the security of 'Iraq's oil revenues and with conditions of moderate interest and repayment spaced over seventeen years. An interest-free loan was granted at the same time by the 'Iraq Petroleum Company in return for a seven-year postponement of its export obligation under the B.O.D. Company's concession; it was payable in six half-yearly instalments of £500,000 each, and repayable at leisure out of royalties.

The Railway section from Tall Kochek to Mosul was completed, at unexpectedly high cost, and trains could now run from that city to Istanbul. The Kut barrage and Gharraf headworks were completed in March 1939: the official opening had been King Ghazi's last public act. With its fifty-six mechanically-operated gates, overall width of 1,615 feet, lock, and fish-ladder, this important work had cost £1,200,000 and, given full dependent canalization (at present lacking), was capable of the controlled irrigation of a million acres. The seven-gate Yau regulator, at the end of that branch of the Kufa channel, was erected in 1939–40, also by Messrs. Balfour Beatty. A new and improved Diyalā weir (p. 263) was undertaken in 1939 and completed by the end of 1940. Execution of the Habbaniya project, which had been revived urgently after the Euphrates floods of 1938, was entrusted in June 1939 by contract to Messrs. Balfour Beatty for £700,000 for the first phase, that of the intake canal to the lake at Ramadi and the controlled outlet from the lake to the vast Abu Dibis depression. Work on these was pressed forward. The first of the two steel bridges at Baghdad, built under contract by Messrs. Holloway Bros., was completed; it formed an imposing structure, 700 ft. long and 50 ft. wide, and, named al-Ma'mun Bridge, was opened with ceremony by the Regent. Bridge tolls were abolished throughout the country. A long-standing project drew nearer to realization when a Government bank, to be known as the Rafidain Bank, was established by law though not yet opened; its initial capital was fixed at £500,000, subscribed in part by the State. A revised version of the capital works programme was evolved by Rustum

1: Longrigg G-4, 5 (ca. 1915-1940) MH1 Iraq MH1

652 the same amount at 3 per cent. interest, redeemable in ten years. The loans, regarded as experimental, were well received but too small to be of deflationary value. The Banco di Roma disappeared in 1941. The State-owned Rafidain Bank opened in the same year and handled Government accounts; by 1945 its trading began to show profit. The Agricultural and Industrial Bank developed within narrow limits during the war period, and in 1945 a division into two separate institutions, for Agriculture and for Industry, was decided, to be followed later by connected Real Estate and Mortgage Banks. The Arab Bank (of Palestine) opened a branch in Baghdad in the same year.

722 The material development of the territory, which proceeded
496 hopefully till 1941, was thereafter of necessity neglected until the end of the war. But 'Iraq was at least fortunate in that, far from a record of destruction or retrogression—the common fate of Europe—it gained considerable additions, at others' expense, to its communication system. The railway rolling stock was augmented by war-time loans from the military authorities, current maintenance was assured by military help in vehicles and equipment from British or lend-lease sources and, for a time, by numbers of imported railway workers, and problems of excessive traffic—notably in goods for Turkey and the Levant, and in grain for movement to Baṣra—were amicably handled. The military Kut-
499 'Aziziya–Ba'quba line was removed after the war. By 1945 it was possible for the Railway Directorate to plan again in terms of major development; its projects included a Baghdad rail-and-road bridge (in replacement of the old waggon-ferry), a bridge at Musayib to give access to Karbalā, a modern station and office block and new marshalling yards at Baghdad, and a sixty-five-mile extension of the line from Kirkuk to Arbil, with a Lesser Zab bridge.[1]

722 The important developments at the Port of Baṣra and its vicinity
504 carried out by military agency included wharves, sidings and approaches, storage facilities, the Shaṭṭ al-'Arab bridge, and a Ma'qil–Ahwaz railway line. Considerable parts of these additions survived the disappearance of Paiforce, though the military jetties at Umm Qaṣr on the Khawr 'Abdullah, and the railway joining these to Baṣra, were dismantled. The military control of Tigris river traffic, relinquished in 1945, bequeathed a permanent legacy of river improvement and repair facilities. With the disappearance
505 of military traffic, the Lynch boats and their rivals could again dispute the civilian traffic, which could not long suffice for al.

[1] Other projects studied at the time were the conversion of all metre-gauge lines to standard gauge, a Baghdad–Homs line across the desert, a standard-gauge line from Kut into Persia, a Karbalā–Najf–Kufa line, and a standard-gauge Mosul–Diyarbakr connexion. None of these materialized.

1: Longrigg G-4, 5 (ca. 1915-1940) MH1 Iraq MH1

considered project; and meanwhile, Fao bar-dredging operations, designed to maintain a low-water depth of 23 feet in a substantially widened Rooka channel, proceeded throughout 1943 to 1950. But heavy floods and consequent silt movement caused serious difficulties and, the existing channel proving barely maintainable, the project of a new channel re-aligned in terms of the changed sea-bed conditions was in 1951 under close consideration. To its realization—the more necessary since 'Iraq's own oil traffic from the Zubayr field was likely to increase many-fold—the loss of the rich Abadan tanker revenue was a serious impediment;[1] but in general the future of the vital Fao channel, and indeed that of the Port in general, was under wise and far-sighted review.

The tonnage of steamers using the Port was more than half—and in some years more than two-thirds—British, with Dutch, American, Greek, Swedish, and Norwegian shipping well represented. The establishment of an all-'Iraqi Shipping Company continued to be an object of ambition among the interested and the nationally-minded, as a means of undercutting the freight rates charged by foreign lines. The post of Port Director was assumed, after two short tenures, in 1947 by Colonel G. T. Johnson, and in 1951 by R. C. Kelt. Accelerated steps were taken from 1948 onwards for the training, largely in Europe, of 'Iraqis for all posts in the administration, including the highest: an 'Iraqi Port Director was a probability of the near future.

Though transport by the 'Iraq waterways had as ever its irreplaceable part both in the lives of the riverain towns and as a main Baṣra–Baghdad artery, available traffic did not permit—as for a generation it had not permitted, save in war-time—any considerable development of the Tigris steamships. Military transport ceasing with the war, and competition by road and rail and air ever increasing, the Euphrates and Tigris Company in 1946 disposed of most of its surviving fleet, including the *Zenobia*; and early in 1951 it went into voluntary liquidation and sold the bulk of its towing-units and barges to its principal local competitor, Ḥannā al-Shaykh. The latter and members of the Khudhayri family remained active on the river to fill the place which, after ninety years, was now abandoned as unprofitable by the Lynch enterprise.

The 'Iraq Railways, which had embarked in 1945 (p. 320) on important projects of construction, were faced also by a heavy programme of needed rehabilitation, improvement of services, and addition to rolling-stock. The five following years saw the com-

[1] The action of the Persian Government in bringing its oil industry to a standstill involved, besides its own ruin, a loss of at least £1 million a year to the finances of Baṣra Port and its dredging scheme.

1: Longrigg G-4, 5 (ca. 1915-1940) MH1 Iraq MH1

pletion of the Kirkuk–Arbil extension and its Lesser Zab bridge: of the railway and road bridge[1] at Baghdad, opened late in 1950: of the Musayib bridge leading to Karbalā: and of new stations at Ba'quba, Diwaniya, Naṣiriya and elsewhere. New rolling stock was ordered and by 1950 delivered. Progress was made in erecting a grandiose combined station and administrative headquarters at Baghdad West, and in redesigning the yards and depots there; but the high cost of these projects, the diminution of receipts by road and air competition (in spite of good traffic in grain and oilfield materials), and losses due to repeated river flooding rapidly exhausted the war-time surplus and led to the need to borrow first from Government in 1946, then from London—a loan of £3 million —in 1950, before supplies and contractors could be paid and work could proceed. Working conditions in the railway system were disturbed by the strikes elsewhere mentioned in 1945, 1946, and 1949. The Jewish employees of the traffic branch were replaced in 1949 by imported Pakistani staff, and the training of 'Iraqis to replace these and the few remaining British executives was accelerated. The status and composition of the Railway Board was unchanged, though criticized by the press as outdated and insufficiently 'national'. The post of Director-General was passed by H. C. Smith to W. J. Moffat in 1950, and an 'Iraqi, General Isma'il Ṣafwat, assumed the post in 1952.

'Iraq Airways was initiated by the Railway as a subordinate enterprise in 1945, and started service in 1946 with five light aircraft hired from Great Britain. In the following year the hired aircraft were replaced by its own machines, and it extended its range from Baghdad–Basra outwards to Mosul, Cairo, and Damascus, and by 1948 could, thanks to reciprocal agreements, offer transport weekly or monthly to Teheran, Karachi, and Ankara. The service, to which British Overseas Airways Corporation acted as technical advisers and agents, was efficiently maintained but, thanks to competition and high costs, financially unprofitable. British, American, Dutch, French and other foreign airlines continued to use 'Iraqi airports. An expenditure of over ID 2 million on aerodromes formed part of the six-year development plan. The meteorological service, begun in 1936 in a single room, now maintained under the Ministry of Defence a dozen stations and many rainfall-observation posts, used its own wireless links, and broadcast weather reports for Baghdad area half-hourly.

Telecommunications had, by the close of the period, reached a high standard. Trunk land-lines had been overhauled, often duplicated and widely extended; automatic telephone exchanges

[1] The bridges were built by Messrs. Holloway Bros.; earthwork on the Kirkuk–Arbil line was handled by Messrs. Balfour Beatty.

1: Longrigg G-4, 5 (ca. 1915-1940) MH1 Iraq MH1

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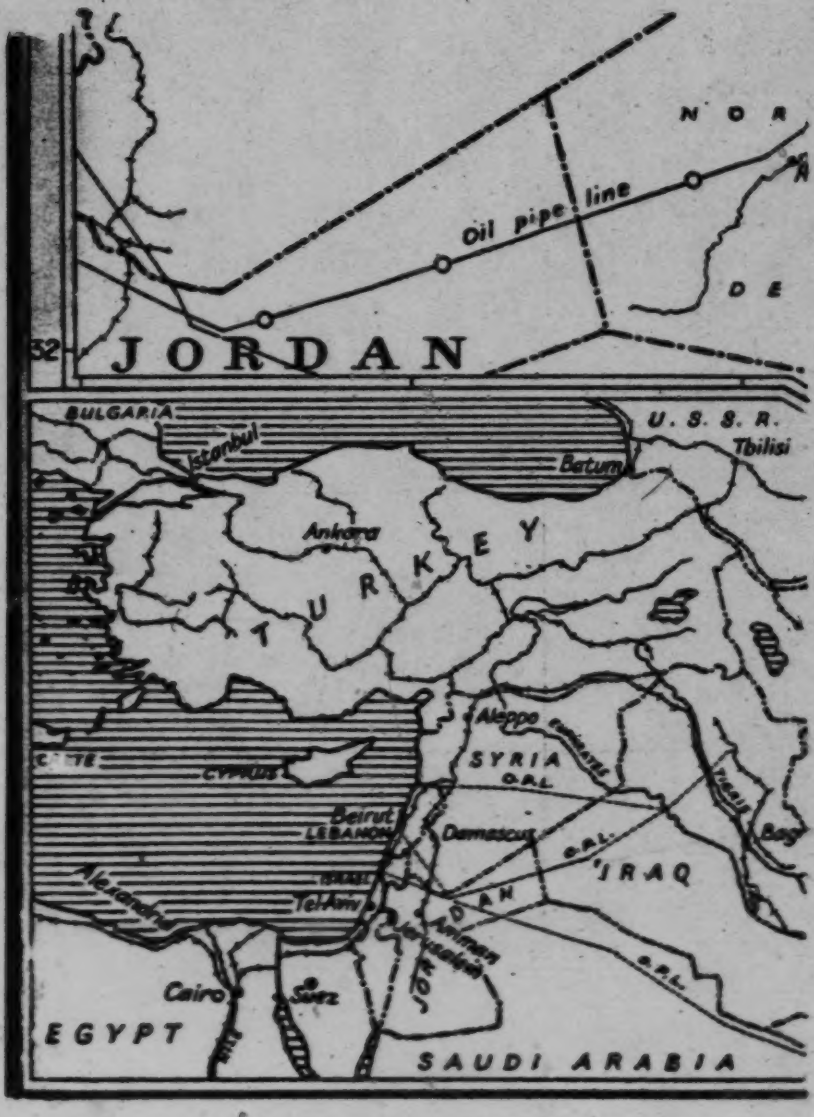

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End map (B)

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1: Longrigg G-4, 5 (ca. 1915-1940) MH1 Iraq MH1

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End Map (d)

1: Longrigg G-4, 5 (ca. 1915-1940) MH1 Iraq MH1

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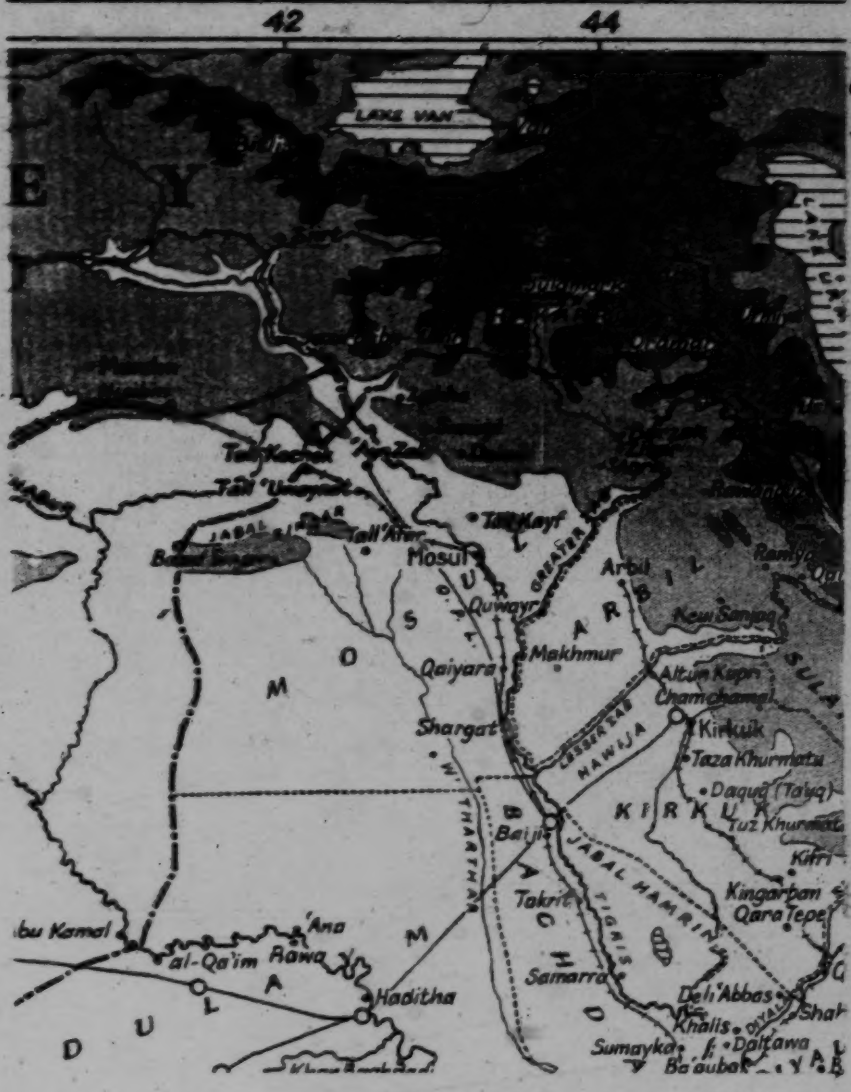

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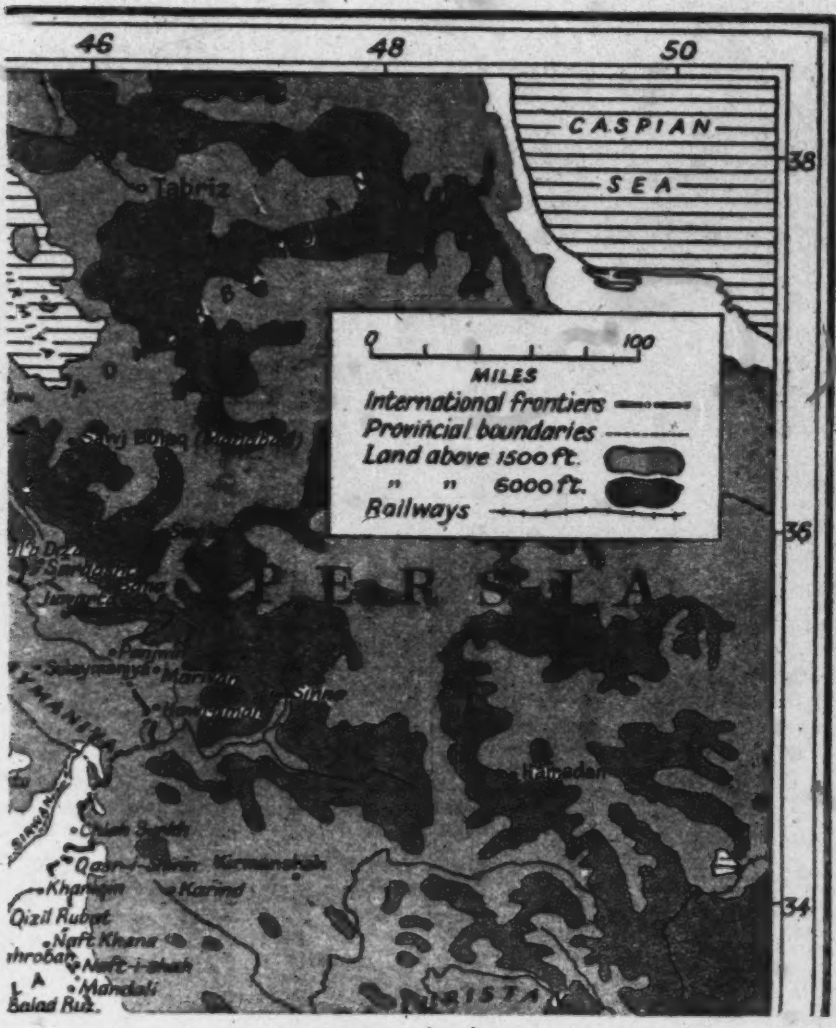

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4a Wilson G-3 (no date) 1937 MH1 Iraq MH1
Iraq Bedouin MH8

I 162 The population of Mosul and Arbil provinces exceeds 630,000, of which 530,000 are Muslims. Of these Muslims, all but 10,000 are Sunnis. There are 60,000 Christians, 32,000 Yezidis and 10,000 Jews. The minorities therefore total only one-fifth of the whole. The Muslims consist of Arabs and Kurds in approximately equal parts, together with some 16,000 Turkomans.

I [162] 438 439 496 Mosul itself is mainly an Arab town with a population of 100,000. It is a great entrepôt for trade in sheep, cattle, wool, grain, hides, intestines, galls and eggs with the thickly populated districts round and also with Syria and Turkey. Its importance in this respect will certainly increase when at long last it is linked by rail with the Syrian frontier at Tel Kuchik and with Baghdad via Baa'iji. Work on this linking is now proceeding, and it is interesting to remember that when it is completed in a couple of years it will form the last stage in the famous Baghdad-Berlin Railway which was the Kaiser's fondest dream. The circumstances under which it will be completed are likely, however, to be very different to those which he visualized.

Arabs

I B 101 Apart from forming the majority of the inhabitants of Mosul itself, Arabs are found as cultivators on the Tigris both north and south of the town and to the south of the Jebal Sinjar (Sinjar mountain) and as bedouin who range the uncultivated areas to the south-west, west and north-west.

B 619 221 721 233 The bedouin consist of more than one tribe, but by far the most important is the Shammar. This great tribe is of Arabian origin and has in the past been pushed steadily northwards by economic forces and the search for new grazing grounds. With the great improvement in public security during recent years, cultivation has extended further and further from the towns and villages and encroached on the haunts of the Shammar. Formerly the means of livelihood of these bedouin were varied if not all respectable. They included the raiding of the flocks and herds of their weaker neighbours and the extortion of "khuwa" or safe-conduct money from merchants, travellers and others. At the same time they made a perfectly legitimate living from acting as shepherds for the flocks of townsmen and by breeding and selling camels. Nowadays raiding and safe-conduct money have been abolished and motor transport has to a great extent ousted the camel as a carrier in 'Iraq and the neighbouring countries and caused a severe slump in the camel market.

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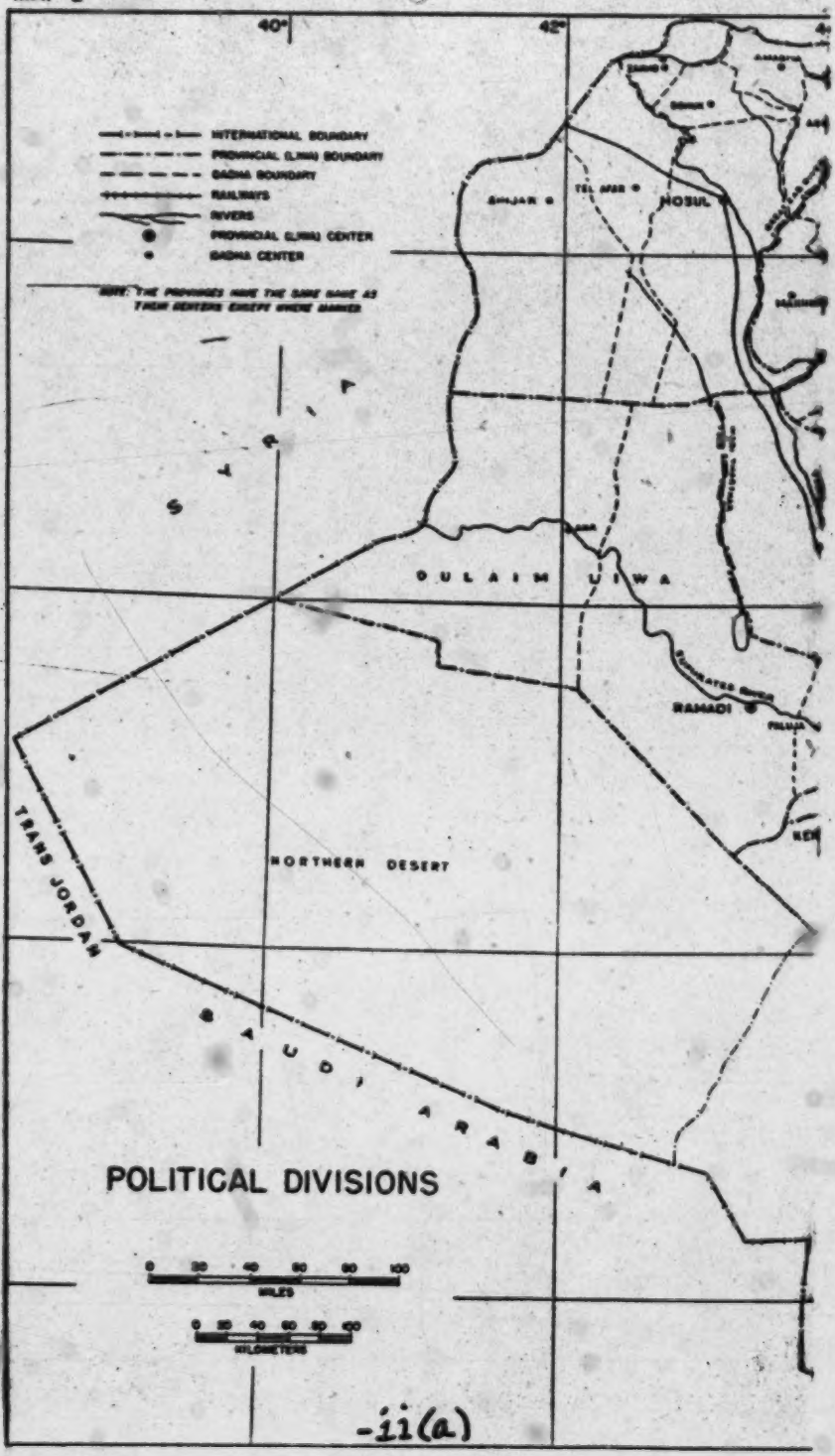

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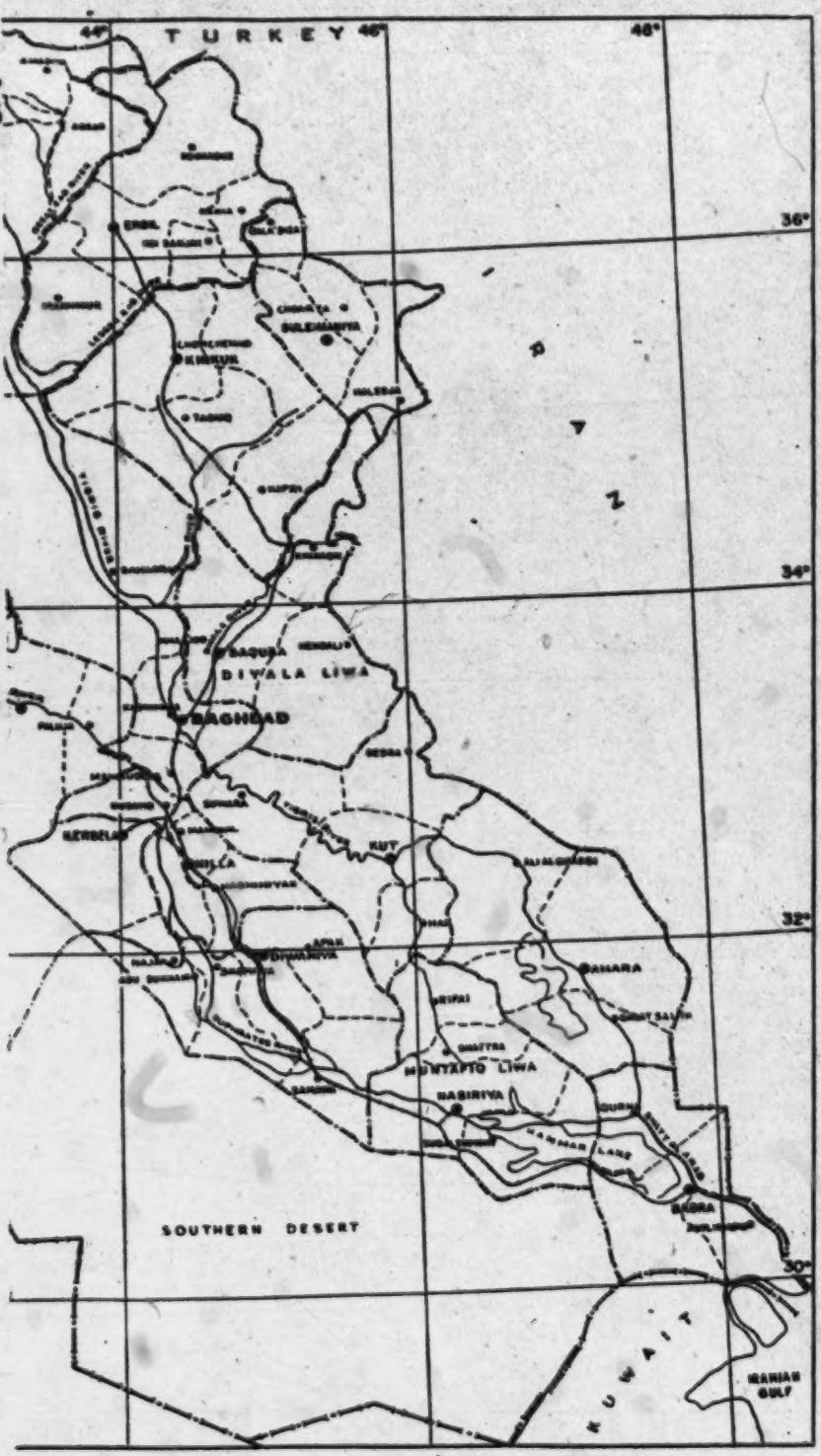

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The Port

The Port of Basra, an autonomous public agency which also operates the civil airport, is efficiently run and capable of handling a considerable increase in traffic. In view of the adequacy of this port, the Mission sees no justification for the construction of another port at Umm Qasr as has been suggested from time to time. The Port of Basra has been able to finance necessary capital improvements, as well as to pay off its debts, out of current surpluses and should be able to do so in the future except for the task of financing the dredging of a new and urgently needed channel across the Fao bar. The existing channel is subject to heavy silting which necessitates extensive dredging operations at a cost of ID 500,000 to ID 600,000 per year. Until recently it was expected that the Anglo-Iranian Oil Company would advance the funds necessary for this new channel, but recent developments in Iran, coupled with the fact that ample oil revenues will be available to Iraq for investment, appear to make it desirable that the Development Board finance this project.

The Railways

The state railways, which are the principal means of transport, are also well managed and have been fully able to meet traffic requirements. They have come in for considerable criticism, however, because of the serious financial difficulties in which they have become involved. The major source of these difficulties lies in the fact that, in 1944, the railways, with the full approval of the government, began a major capital development program without assurance of adequate financing. To defray the cost, the railways have had to use a fund of about ID 2,500,000 set aside for renewals and to borrow ID 1,000,000 from the government as well as £3,000,000 in the United Kingdom with the help of the Export Credits Guaranty Department of the British Government. The program was for the most part soundly conceived and is now largely completed. However, it has left the railways without adequate funds not only for essential renewals but also for other construction projects. One of the major and more controversial projects affected is the erection in Baghdad West of a rather imposing terminal station and railway headquarters together with relocation of railway

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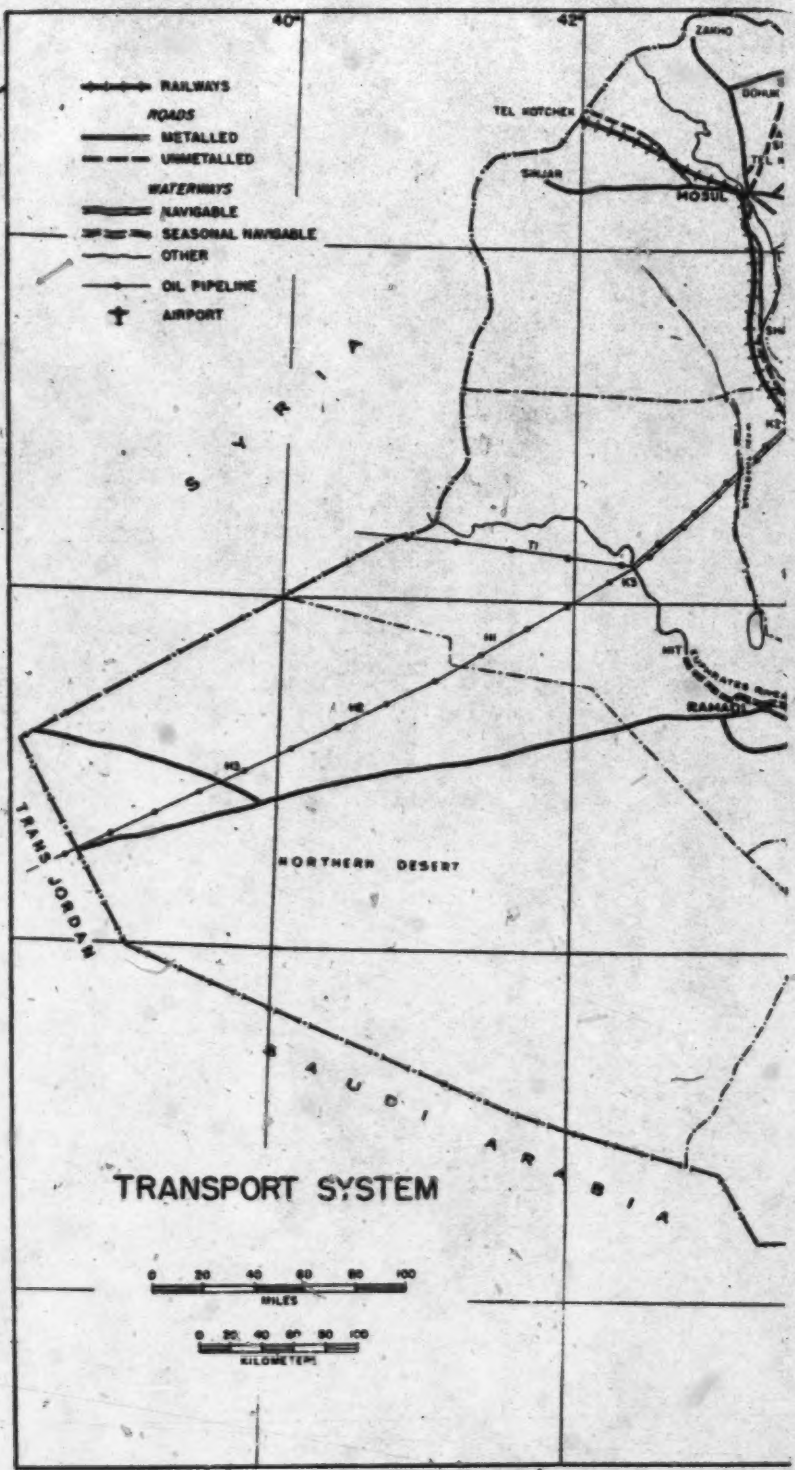

FACING P. 44(A)

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MAP III

FACING P. 44 (B)

7: International Bank N, S-4 (1951) 1952 MH1 Iraq MH1

lines and rebuilding and extension of railway goods and marshalling yards. Much of the latter project is really part of Baghdad town planning and its cost should therefore not be completely charged to the railways.

These problems, as well as that of tractive power on the railways, have recently been studied by a British engineering firm. With some modifications, the Mission endorses the conclusions contained in its report. The railways should be enabled to carry out a program involving essential renewals of track and rolling stock, gradual conversion to diesel traction and the completion of the Baghdad-West scheme on a drastically modified basis which would entail finishing the railway station but postponing most of the balance of this project. The Mission suggests, however, some modifications in the British firm's proposals on the latter scheme, the details of which are set forth in the monograph on transportation. The railway station when completed should serve also as the airport terminal and provide offices for the railway administration and the government.

Since the railways can finance only a small portion of this program out of their own resources, the Mission recommends that the Development Board supply the bulk of the required funds. In addition, the Board might take over amortization of the £3,000,000 loan contracted by the government on behalf of railway development. This must be repaid over a six-year period from June 30, 1952.

The Mission also urges that immediate consideration be given to the problem of standardizing the gauges on the railway lines. The Basra-Baghdad-Kirkuk-Erbil line and the branch line to Khanaqin are meter gauge while the line from Baghdad to Mosul, which links Iraq with the railway systems of Syria and Turkey, is standard gauge. The two gauges not only necessitate transshipment, but, above all, make the task of operation complicated and costly. They require a large amount of duplication in activities, of reserves, standbys and spares in all departments. The need for transshipment is likely to be a growing handicap to the railways as traffic requirements increase and the demand for more rapid transport grows.

It is particularly important to consider standardization at this time because the railways face the necessity of carrying out exten-

7: International Bank N, S-4 (1951) 1952 MH1 Iraq MH1

sive renewals of track and rolling stock and must make decisions as to the type of traction. Final decisions on the Baghdad-West scheme can also be more intelligently taken if the issue of standardization is promptly settled. It is unlikely that such favorable circumstances for an economical conversion operation will ever recur.

Conversion of the meter-gauge lines should not be too costly because the construction gauge, formation and bridges of these lines were originally designed with a view to later conversion to standard gauge. Conversion could probably be accomplished within six years. Meanwhile meter-gauge renewals would be kept to an absolutely indispensable minimum. Within a preparatory five-year period detailed plans and cost estimates would be worked out, necessary standard-gauge track and rolling stock ordered and assembled, and diesel locomotives tested with a view to transfer to diesel traction at the end of the period. The actual conversion operation would take only a few days and could probably be carried out at the end of five years for the Basra-Baghdad line and at the end of another year for the Baghdad-Erbil line. It is possible that the total cost of conversion would not exceed ID 6,000,000. The Mission therefore recommends that the advisability of standardizing gauges, together with a program for such standardization, be promptly studied by the railway staff with the cooperation of outside experts.

Finally, in line with the recommendations of the British engineering firm, the Mission suggests that the services of an expert be obtained to make recommendations on the railway rate structure. A general rate increase of about 12½ percent, with some exceptions, was put into effect in the summer of 1951. This did not affect the rate structure which is characterized by certain anomalous differences in the charges made on various sections of the railway system as well as those imposed on various commodities.

Air Transport and Inland Navigation

With respect to air transport, the Mission recommends that the civil airports at Basra and Baghdad be built up to the specifications required by the International Civil Aviation Organization (ICAO) of class B standard airports. This would involve longer runways and improvements in navigational aids, communications

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Petroleum products are distributed by the Rafidain Oil Company, a subsidiary of the Anglo-Iranian Oil Company, and at prices, exclusive of taxes, which are among the lowest in the world.

TABLE 8

PRODUCTION OF PETROLEUM AND REFINED PRODUCTS
(in thousand metric tons)

	1947	1948	1949	1950	1951 (est'd.)
Crude oil					
Iraq Petroleum Company	4,354	3,017	3,671	5,986	7,500
Khanaqin Oil Company	339	367	365	384	350
Total	4,639	3,384	4,036	6,370	7,850
Refined products	n.a.	373	369	393	—

VI. Transport

The state-owned railway system is the principal means of transport, carrying about 2,000,000 tons of cargo and over 3,000,000 passengers annually. Part of it is standard and part meter gauge. The standard-gauge section is part of the original Berlin-Baghdad railway and runs from Baghdad northward via Mosul into Syria and Turkey. The meter-gauge line extends from the Port of Basra in the South to Baghdad and then beyond to Kirkuk and Erbil in the North, with a branch line to Khanaqin. Over recent years the railways have managed to carry out a considerable capital development program despite serious financial obstacles, but they now face the need of replacing, on a considerable scale, old track, rolling stock and locomotives.

Road transport has as yet primarily supplemented rather than replaced railway traffic. There are only about 11,000 passenger cars and a little over 9,000 trucks and buses in the country. Roads are generally inadequate. There are only about 2,500 kilometers of metalled and surfaced roads in all of Iraq. The remaining dirt roads quickly become impassable in bad weather. Some important

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ANNEX E

TRANSPORT AND COMMUNICATIONS

489 Iraq's transport system, which is concentrated in the populated and cultivated eastern half of the country, converges on two points, Baghdad, the capital and trade center, and Basra, the country's only port.

504 The Port of Basra lies about 140 kilometers (85 miles) upstream from the Persian Gulf on the Shatt al Arab and is accessible to ocean-going ships of all sizes entering the Persian Gulf. Its site serves the economy of Iraq well, the junction of the cheaper ocean transport with the dearer inland transport being at the farthest practical point inland.

503 The Tigris and the Euphrates, together with their tributaries, offer natural transport routes. However, they have remained untrained and largely uncontrolled for centuries and, apart from a few short stretches on the rivers and their tributaries which are usable by local traffic, limited and restricted inland navigation is possible today only on the Tigris between Basra and Baghdad.

● 496 The railway system consists of three main lines, two of narrow gauge, one of standard gauge. One of the two meter-gauge lines is the main line from Baghdad to Basra, serving the most densely populated provinces besides connecting the two principal centers. The other links Baghdad with the northeastern provinces, east of the Tigris. The standard-gauge line runs from Baghdad on the right bank of the Tigris to Mosul, Iraq's second city, and beyond through a tip of Syria to Turkey, the Mediterranean and Europe. Until a year ago no physical junctions existed between the three main lines. Goods carried on both meter-gauge lines had to be ferried across the Tigris at Baghdad and then transshipped. The ferry has nov been replaced by a bridge but the transshipment to and from the standard-gauge line remains necessary. Through passenger traffic between the three main lines is negligible.

491 A road system of approximately 8,000 kilometers (5,000 miles) covers the eastern half of the country, but most of the roads

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503 of the Tigris into the marshes would leave more water in the river bed.[1] Navigability might be improved further if the river bed were trained by dams, locks, groins and cribs into a narrow channel at low water and progressively wider channels at higher water levels. Through such measures, limited but uninterrupted navigation could be made possible. It would be necessary, however, to consider whether the cost would not be such as to make river transport uneconomic. As a first step it might be advisable to have the feasibility and cost of training the river bed studied by engineers from the Netherlands who have had experience with similar problems.

IV. Railways

496 The railways are the principal means of inland transport, carrying by far the greater part of the country's imports, exports and internal traffic. The chief commodities carried in bulk are oil, bricks, cement and other building materials, grains and dates.

The total length of the railway system is 1,030 miles (1,648 kilometers) of which 330 route miles (529 kilometers) are standard gauge and 700 route miles (1,119 kilometers) meter gauge. The first railway line in Iraq was completed in 1914 and ran north from Baghdad to Samarra as part of the projected Berlin-Baghdad railway. The Iraqi portion of this standard-gauge railway was not fully completed until 1940 and it is now the only railway link between Iraq and neighboring countries. The balance of the railway network consists of meter-gauge lines, large portions of which were first constructed during World War I when only meter-gauge rolling stock was readily available. One of these lines runs from Basra to Baghdad, following the Euphrates River. The other extends from Baghdad to Erbil via Kirkuk, with a short spur to Khanaqin. The part from Kirkuk to Erbil was finished only in 1949. Until 1950 when a railway bridge was completed across the Tigris, the two meter-gauge lines were connected only by a wagon ferry. Even now there is virtually no through passenger traffic on the two lines. It should be noted that there is no longer a railway south of Baghdad serving the towns along or near the

[1] See Annex B, *Flood Control, Irrigation and Drainage*, pp. 202-203.

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Tigris, although during each of the two World Wars there was a temporary railway connection with Kut.

The railways are state-owned and operated under the management of a Director General who is responsible to a Railway Board appointed by the government. The administration is autonomous and has its own budget which must, however, be submitted annually to Parliament for approval. The administration is well organized, the management capable and the operation efficient and economical.

Capacity

The railway system consists entirely of single track lines built to light standards, and the permitted axle loads are very low. This limits the capacity of the lines and increases the operation problems. There is no doubt, however, that the system's capacity is ample for present demands. During several war years it actually carried about twice the tonnage of goods transported in recent years, even though the length of the system was only about one third greater through the temporary construction of military branch lines (see Table 4).

Railway carrying capacity is in reality rather elastic. The railways could carry as a minimum 15 percent more goods, and, in a pinch, could probably carry considerably more. In consequence of the over-all development program, traffic requirements will undoubtedly increase quite rapidly. For example, the value of imports may double within about five years, and the amount of

TABLE 4

TRAFFIC ON STATE RAILWAYS

Year	Route Kilometers	PASSENGERS		GOODS	
		Passenger Journeys	Passenger Kilometers	Total Revenue Tonnage Carried	Total Revenue Ton Kilometers
1943-44	2,011	4,418,590	662,256,369	3,586,081	905,104,309
1944-45	1,555	4,869,523	669,987,674	2,390,402	648,482,848
1945-46	1,555	5,292,441	775,107,476	1,970,107	513,643,871
1946-47	1,555	4,300,413	630,705,454	1,860,296	600,138,802
1947-48	1,555	3,725,463	529,066,676	1,714,290	556,623,270
1948-49	1,555	3,340,034	473,075,056	1,674,289	497,306,309
1949-50	1,648	3,609,337	517,939,859	1,980,795	657,097,000

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internal traffic, particularly in building materials, will also rise substantially.[2] The burden on the main trunk line from Basra to Baghdad will increase especially. If steps are taken, however, to carry out the necessary replacement and rehabilitation measures outlined in this monograph, the railways should be able to handle much of the increased traffic. Part of the increase will presumably be absorbed by the roads.

The financial position of the railways has not been wholly satisfactory in recent years. To be sure, they have had a considerable operating surplus until the last few years, as is indicated in Table 5. Since 1945-46, however, this surplus would have actually disappeared or been converted into a deficit if it had not been for the fact that the sum set aside for renewals and depreciation was rather inadequate. In 1948-49 a small surplus was achieved only because the amount appropriated to the renewals account was cut from ID 400,000 to ID 250,000; and when the

[2] See the Mission's main report, pp. 88 *et seq.*

TABLE 5

RAILWAY FINANCE
(in dinars)

Year	Operating or Ordinary Budget			Capital Expenditure
	Revenues	Expenditures	Balance	
1938-39	733,613	753,063	−19,450	938,115
1939-40	752,546	733,530	+29,016	559,492
1940-41	953,379	800,712	+152,667	176,866
1941-42	2,241,657	1,440,546	+801,111	159,937
1942-43	4,775,646	2,316,576	+2,459,070	161,905
1943-44	5,067,899	3,781,525	+1,286,374	137,258
1944-45	4,141,110	3,132,064	+1,009,046	112,366
1945-46	3,769,823	3,241,988	+537,835	387,684
1946-47	3,436,403	3,206,164	+230,239	789,095
1947-48	3,794,003	3,549,115	+244,888	1,761,123
1948-49	3,633,022	3,614,569	+18,453	2,778,902
1949-50	3,991,297	3,705,542	+285,755	1,068,558
1950-51*	3,949,200	4,041,400	−92,200	1,734,000
1951-52*	4,211,100	4,274,100	−63,000	902,500

* Budget estimates.

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provision for renewals was raised to more adequate amounts in the 1950-51 and 1951-52 budgets (ID 600,000 and ID 875,000 respectively) deficits developed.

The primary cause of financial difficulties was the large post-war capital development program. Following the prosperous war years, the government authorized the Railway Administration by Law No. 25, 1944, to carry out a major capital development program at a cost of ID 5,250,000. The program itself was, on the whole, sound and necessary, with the exception of the ambitious project for Baghdad-West involving the construction of an imposing new station and an entirely new railway layout. In included, among other things, the extension of the railway from Kirkuk to Erbil and the building of several new railway bridges, including one at Baghdad. It proved extremely difficult, however, to finance these and other capital expenditures. When the program was authorized, it was established that the railways themselves would be able to defray only half the cost. The rest was presumably to come from future government and railway revenues. Railway traffic and revenues, however, fell off rather sharply after the war, and beginning in 1948 the government became involved in serious difficulties as a result of the outbreak of war with Israel, the closing of the Haifa pipeline and two successive poor harvests. After making an initial 15-year four percent loan of ID 1,000,000 to the railways in 1947, the government could give no further financial assistance. In order to finance the rest of the program, the railways used up such balances as were available in the general reserve fund as the result of past surpluses and then depleted the funds set aside for depreciation and renewals. The latter, by the end of the fiscal year 1949-50, amounted to almost ID 2,600,000. Even then it was necessary in 1950 to meet overdue bills by placing a loan of £3,000,000[a] through the Export Credits Guaranty Department of the British Government. By the end of the 1950-51 fiscal year only £407,000 of this loan remained unutilized and this amount was earmarked for further payments to contractors for works already being executed.

[a] The interest on this loan is four percent and the principal is repayable over six years from June 30, 1952.

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As of the spring of 1951, when the Mission visited Iraq, the financial situation was about as follows. Capital expenditures had been reduced far below the amounts budgeted. Preliminary actual budget figures for the first half of 1950-51 indicated that total capital expenditures for the year might be only about one fourth of the amount authorized by the budget. For 1951-52, projected capital expenditures had been slashed well below the original estimates of the preceding year. The railways needed about ID 1,500,000 to meet commitments for the completion of capital works under way. More important, deferred renewals of locomotives, rolling stock and track were becoming more urgent just when no money was available to meet the cost.

The Palmer Report

Growing concern and anxiety about the railways' financial position led to a decision in 1950 to seek advice from independent consulting engineers. In May 1950 Messrs. Rendel, Palmer and Tritton, consulting engineers of Westminster, London, were invited to investigate and report on certain affairs of the railways in accordance with the following terms of reference:

1. To examine the railway accounts and ascertain the true financial position;
2. To examine and advise on the sanctioned Major Development Program in its economic aspects, with particular regard to the financial position of the Railways;
3. To advise on the rehabilitation and modernization of the system; and
4. To investigate and advise on the most suitable form of motive power for the system.

The investigations were completed and the Report issued in March 1951.

The Report is lucid and valuable, and its recommendations and suggestions should be implemented as far as practicable. Since it is clearly limited, however, to advice on developments with a view only to the economic and financial aspects of the railways, its recommendations may have to be supplemented and in some cases amended when considered in a wider framework.

The main conclusions of the Palmer Report can be briefly summarized. With respect to the accounts and financial position

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of the railways, the Report recommends that the renewals fund be restored and adequate allocations made for renewals in the future, that the financial department be reorganized to some extent and that the structure of rates and fares be studied and revised. On the Major Development Program the Report suggests completion of the Baghdad-West railway layout but on the basis of a revised plan. For the rehabilitation and modernization of the railways it proposes a detailed renewals program for a 10 year period and makes several minor recommendations. Finally, with respect to motive power, the Report recommends the conversion of the meter-gauge lines to diesel traction within 10 years.

The Mission approves these recommendations in general, but offers below a number of comments, amendments and additional recommendations so as to fit them into the wider field of coordinated economic development.

Financial Situation and Accounts

The Palmer Report envisages a renewals program costing ID 10,600,000 over an 11 year period. Of this sum it anticipates that the railways may be able to finance ID 8,175,000 out of current revenues on the assumption that the total set aside for this purpose from operating income can be gradually increased from ID 600,000 in the first year to ID 875,000 in the last year. A balance of ID 2,425,000 would therefore have to come from other sources. If it is decided, in accordance with a recommendation made later in this monograph, to standardize the railway gauge, the whole program of renewals will have to be considerably accelerated. The amount of financing required over the next five years will then be substantially increased.

The railways would undoubtedly be in a better position to finance these renewals out of their own resources if the administration were not burdened with expenses for other government operations, unconnected with the railways. For example, the railways have carried all the losses of the government airways throughout their existence, and the government has taken valuable railway land without compensation for projects entirely unconnected with railway operations while, at the same time, forcing the railways to pay high costs for new land required for railway use. The

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railways maintain at their own expense the many bridges used for the dual purpose of rail and road traffic, and they supply the necessary signalling and guarding services. The railway administration has built a costly rail and road crossing of the Tigris at Baghdad but must wait for the Road Department to contribute its share of the expense even though the latter requires the railways to pay for certain stores in advance of delivery. Finally, although the new Baghdad station with the elaborate new layout was conceived largely in the interests of town planning, the railways are expected to finance the entire cost and are also blamed for extravagance.

Some financial readjustments are clearly necessary to enable the railways to carry out the proposed essential renewals program. Further financial difficulties in the future can be avoided only if advance provision is made for additional capital projects and if the railways are adequately repaid for services rendered. It cannot be emphasized too strongly that, unless these steps are taken, the railways will, in a few years, become incapable of coping with normal traffic demands and those imposed by the country's development schemes; and there will be no alternative transport agency available.

In the field of financial administration the Palmer Report recommends the establishment of a Financial Committee inside the railway organization and the appointment of a Financial Secretary in addition to the Chief Accountant and the Auditor already in service. The Mission believes, however, that for a railway administration of the present size this may require too many leading officials in a single department. It suggests that no more than two persons will be needed to assure the three services, namely financial secretariat, accounts and audit.

The prevailing structure of rates and fares is not unsound but it is characterized by certain anomalies. In 1948-49 average goods earnings were only 209 percent higher than a decade ago although the wholesale price index in Baghdad had risen by 363 percent from 1939 to 1949. Moreover, the rate increases have been somewhat haphazard, varying from 50 percent for dates to 530 percent for tea, sugar and piece goods. In the summer of 1951 a further general rate increase of 12½ percent, with some exceptions, was put into effect. The rate structure is also defective in that all fares

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and rates per kilometer or ton-kilometer unit vary between the different sections of the system. They should be standardized. The abnormally wide variations in rates between commodities should be adjusted. The Palmer Report recommends the appointment of a rates and fares expert to study the matter. The Mission agrees that a traffic research officer with expert knowledge of tariff structure should be appointed as a temporary consultant to the railways. It is particularly important that he be conversant with traffic research so that he may provide for rate adjustments when traffic in certain commodities declines or increases exceptionally. With increased road traffic competition such research will become imperative in the very near future.

Baghdad-West Railway Developments

The plan for this major development scheme consists of a new terminal station building and railway headquarters to replace the existing separate Baghdad-West meter-gauge and standard-gauge stations, and the rebuilding and extension of the goods and marshalling yards. The plan was inspired chiefly by two desires, one to provide Baghdad with a modern central station, the other to make room for a town extension in the southeastern area planned on modern principles free from railway level crossings. The plans would necessitate the realignment of the line to Basra, around the development area so that it enters Baghdad terminal station from the northwest.

The Palmer Report rejects the official scheme principally because (1) increased length of the line to Basra would mean increased operating costs for the Railway and higher rates and fares for the public and (2) the operation of Baghdad station as a terminal instead of a "through" station would further increase operating difficulties and reduce the station's capacity. The Report submits a revised scheme in which the passenger terminal station is retained for the Mosul and Kirkuk lines, and the Basra line is retained along its present alignment with its own platforms, connected with the new terminal building. A plan for a provisional Stage I to bring the new station building into operation is also submitted.

The Report is on sound ground in pointing out the disadvantages of the increased mileage on the Baghdad-Basra lines

7: International Bank N, S-4 (1951) 1952 MH1 Iraq MH1

and in stressing the disadvantages of operating the station as a terminal in so far as goods traffic is concerned. An additional major disadvantage of the plan would be that in the new alignments the two meter-gauge railway yards would be on opposite sides of the standard-gauge railway yard, thus presenting very serious operating difficulties. A terminal station for passenger traffic, however, presents a different case and would actually offer advantages in concentrated operations, safe and easy circulation of passengers, luggage, mail and parcels. But it is obviously out of the question to build a new passenger line outside the town and at the same time retain the existing line for goods traffic through the town.

It is obvious that a considerable time must elapse before a final decision as to the town planning, including government buildings, will be reached, and it is essential that at least the new terminal station, now nearing completion, be brought into operation. It is also desirable that no major reconstruction of yards be carried out until a final decision is reached. It is recommended, therefore, that a provisional plan be carried out, but on a modified, simpler scale than the Palmer Report Stage I. A modified plan is attached to this monograph as Appendix A. Its cost would be approximately one third of the Stage I project scheduled in the Palmer Report. In any case the Basra line platform should be sited immediately alongside the station building. It is indefensible to erect a terminal station costing ID 4,000,000 with the principal main-line platforms as appendices far away from the circulating area.

If future decisions for Baghdad town expansion demand the removal of the Basra line from its present alignment, the whole layout should be revised and the goods-marshalling yards constructed as a through yard, outside the present area, as indicated in outline on the plan attached to this Report as Appendix B. This layout would overcome the disadvantages of increased mileage and higher operating costs.

The Mission therefore recommends that the funds be made available for completing and bringing into operation the railway terminal station and headquarters and that an additional sum for a simplified provisional layout be also allocated. It suggests further that the new station building be used as follows:

7: International Bank N, S-4 (1951) 1952 MH1 Iraq MH1

Ground Floor—half railway station, half airways terminal.[4]
First Floor —railway headquarters
Second Floor—non-railway offices

Other Developments

The Baghdad-West layout is not the only development project for which financial provision is needed. As the Director General of Railways indicated in a memorandum of March 17, 1951 to the Minister of Communications and Public Works, there are in all 22 projects, which are either completed or too far advanced to be abandoned. A list of these is given in Appendix C. On some of those completed, payments are still due; and others cannot now be finished for lack of funds, even though their completion is in the interest of the country's economy as well as the railway's operating efficiency. It is important, therefore, that the necessary funds be made available to the railways.

On the other hand, it will not be necessary at this time to provide for extensions of the railway network. Projects have been studied or suggested for new railways lines and extensions between

Kerbela—Kufa,
Baghdad—Kut, on the right bank of the Tigris,
Kut—Nasiriya,
Kut—Amara,
Amara—Basra

All these projects are in principle worth studying, but no decision as to their usefulness can be reached until the effects of road building and organized road transport on general traffic flow has been further investigated.

Rehabilitation and Modernization

In principle the suggestions of the Palmer Report should be adopted, although the extent to which they can be implemented in practice can be determined only after further study and recommendations by the head of each department concerned. Undoubtedly some further allocation of Development Board funds will be needed to carry out the ultimate recommendations.

Diesel Traction

Iraq's oil resources favor diesel traction, especially in view of the problems involved in supplying the water that steam traction requires. The Palmer Report has proved the case for diesel trac-

[4] See the subsequent section on airports.

7: International Bank N, S-4 (1951) 1952 MH1 Iraq MH1

•496 tion, and it is recommended that the trial period be begun at the earliest possible date with due regard to considerations set out in the following paragraphs dealing with possible gauge conversion. The cost of converting to diesel traction, estimated in the Palmer Report at ID 4,155,000, has already been almost entirely included in the projected outlay on renewals given earlier.

Gauge Conversion

One major problem remains practically untouched, that of unification of the railways' gauge. The problem has never been studied in detail. At various times estimates have been produced, usually at short notice and always based on the assumption of the necessity of complete replacement of track and rolling stock. It has often been forgotten that the construction gauge, formation, bridges, etc., of the meter-gauge lines were originally designed with a view to ultimate conversion to standard gauge.

There is no doubt that the division of the railway system in two gauges with a transshipment point at the center is a handicap to full traffic development. The question is whether the cost of conversion and the temporary disturbance of the free flow of traffic can be reduced sufficiently to be outbalanced by the increased efficiency and cheaper operation that the unified system would bring.

There are several reasons why the problem should now be studied in minute detail.

1. The long-term general development program of the country will probably entail capital expenditures of about ID 160,000,000 over the next five years and perhaps even larger amounts in later periods. Such an expenditure must result in increased production and consumption and in consequence increased transport. With this in view it might be sound and reasonable to include in the capital program a project for rail gauge conversion which would make railway transport more efficient.
2. Although existing administration, operation, service of workshops, stores, etc., for the two gauges are admirably integrated, there exists, of necessity, a large amount of duplication in activities, of reserves, of stand-bys and spares, in all departments.
3. The developments contemplated in the areas now served by the standard-gauge line north of Baghdad will be handicapped by transshipment on the main export and import route.

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4. The meter-gauge system is completely isolated from the standard-gauge systems in all adjacent countries; and such isolation may become a growing handicap to Iraq if additional rail connections become desirable in the interest of security or international trade.

5. Serious consideration must be given from now on to road transport. The proper economic use of both road and rail transport facilities will be much more difficult as long as the railway system suffers from a transshipment handicap.

A decision on gauge conversion should be taken now, in view of the major developments contemplated in the next five or ten years. Once these major developments are achieved with retention of the existing system, an opportunity for conversion, however desirable, will not recur again under circumstances as favorable as the present.

The major developments contemplated and directly affected by possible gauge conversion are:

1. Diesel traction to replace steam;
2. The intensive renewal program of track and rolling stock, which is now required in view of the age of the railway, and which must be carried out in any event;
3. The Baghdad-West layout in conjunction with town development.

It is emphatically recommended that the problem of gauge conversion of all meter-gauge lines be made the subject of a serious and thorough study in all its details. The existing railway staff is fully capable of doing this work; its members know all the local possibilities and difficulties, but, already overburdened in their day-to-day duties, they cannot possibly find the time to carry out the study alone. They should therefore be assisted by consultants for a period of, say, three to six months; and the consultants Messrs. Rendel, Palmer and Tritton might accordingly be recalled to carry out the study under the direction of the Director General and in close cooperation with the railway staff.

Such a study should cover the following subjects:

1. Assessment of the principal reasons for conversion;
2. A possible conversion program, completely integrated with the programs for renewals, introduction of diesel traction and completion of the Baghdad-West scheme;

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3. A five-year program of preparation involving:
   a. An initial test period of diesel locomotives and final transfer to diesel traction at the end of the fifth year;
   b. A concentration into five years of the program for track and rolling stock renewals projected by the Palmer Report. All the renewals to be for standard gauge, and no meter-gauge renewals beyond absolutely essential replacements from now on;
   c. A careful calculation of the extra capital cost involved, due consideration being given to expenses to be met in any case under existing operations, within the next five years or at some later time;
   d. A careful estimate of the savings in administration, operation, maintenance and renewal expenditures the unified system would afford.

A technical essay on the actual conversion work is attached to this report as Appendix D.

It is difficult to estimate the cost of the conversion operation in advance of this proposed study, but it may not be far from ID 6,000,000. As already indicated, however, it will also necessitate compressing the projected renewals program in a much shorter period. Thus, prior to conversion it would be necessary to carry out not only the renewals projected in the Palmer Report for the first five years, but also those contemplated for the meter-gauge lines in the rest of the period. Under those circumstances the outlay in renewals would be approximately as follows:

Mechanical (other than traction)	ID 2,000,000
Civil	3,400,000
Diesel traction	4,155,000
Total	ID 9,555,000

During this five-year period the railways would be able to finance only about ID 3,250,000 out of their own resources, i.e., through allocations out of current operating revenue. An estimated renewals deficit of ID 6,300,000 would therefore have to be financed over the next five years. Part of this might later be repaid out of railway revenues.

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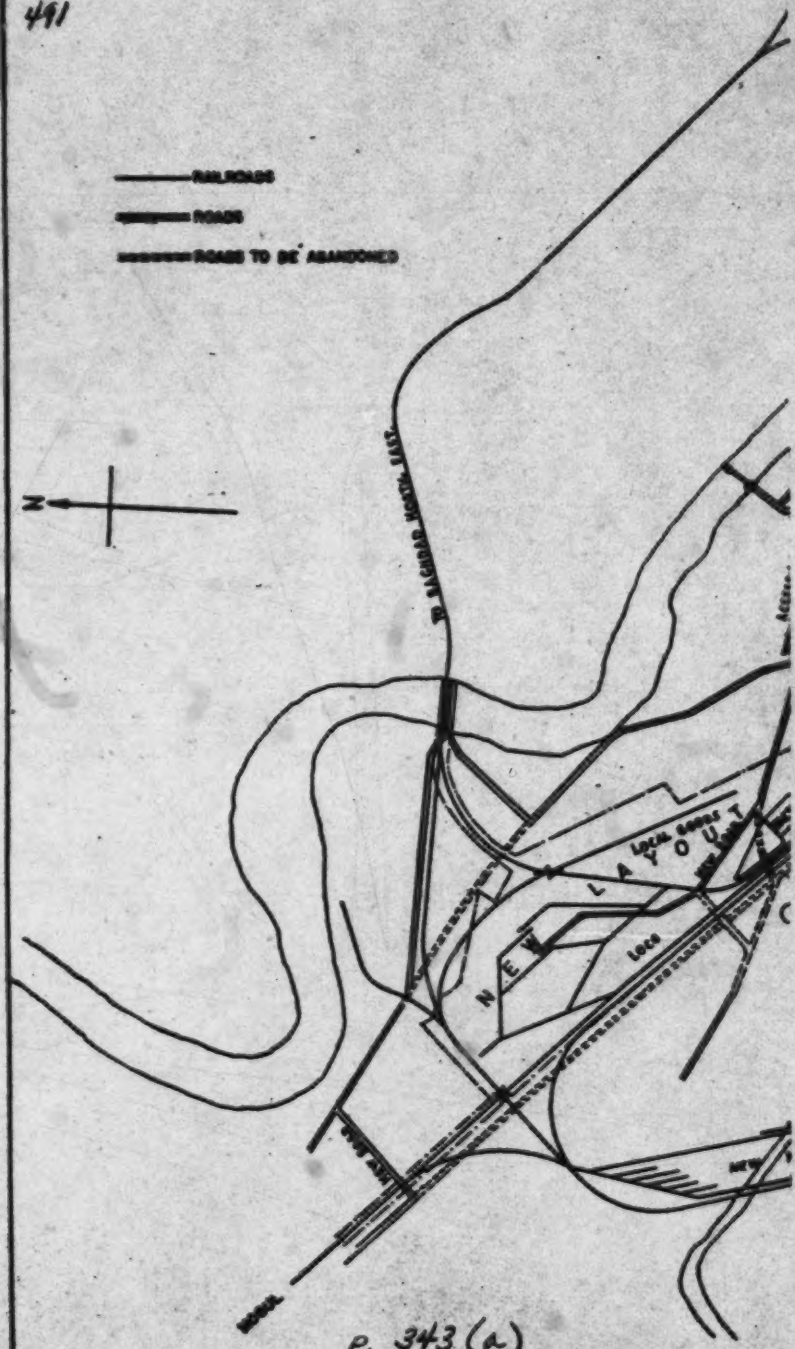

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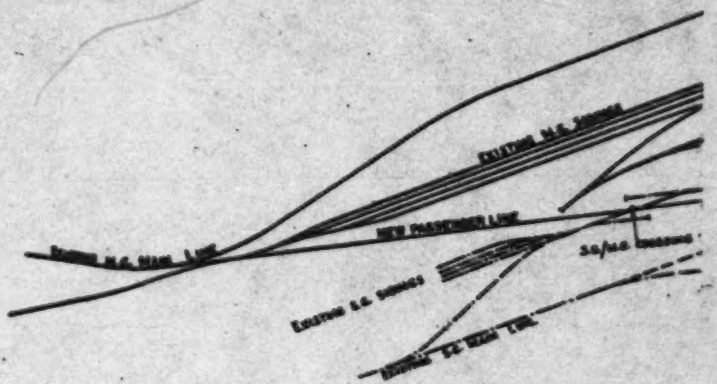

METRE GAUGE

STANDARD GAUGE

STANDARD GAUGE REMOVED

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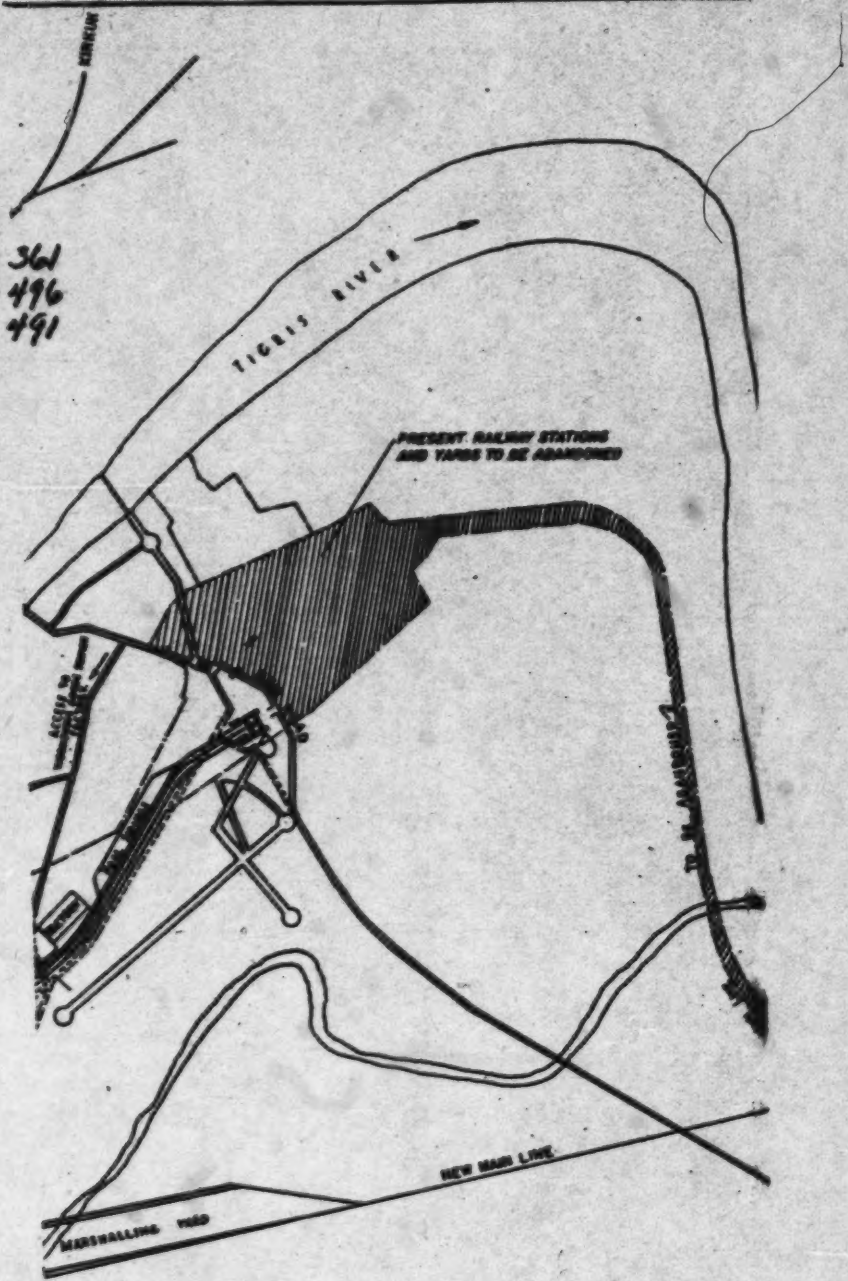

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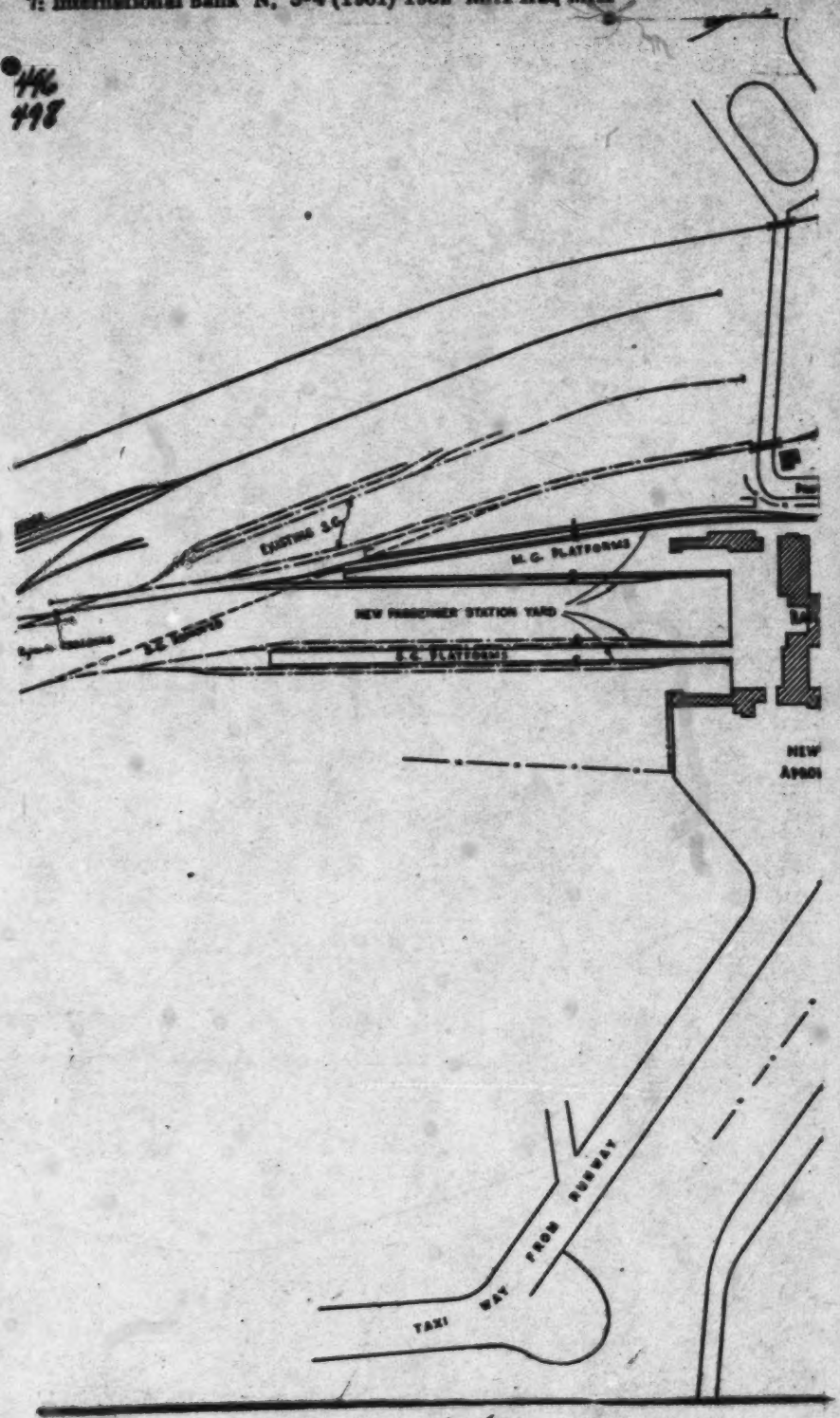

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7: International Bank N, S-4 (1951) 1952 MH1 Iraq MH1

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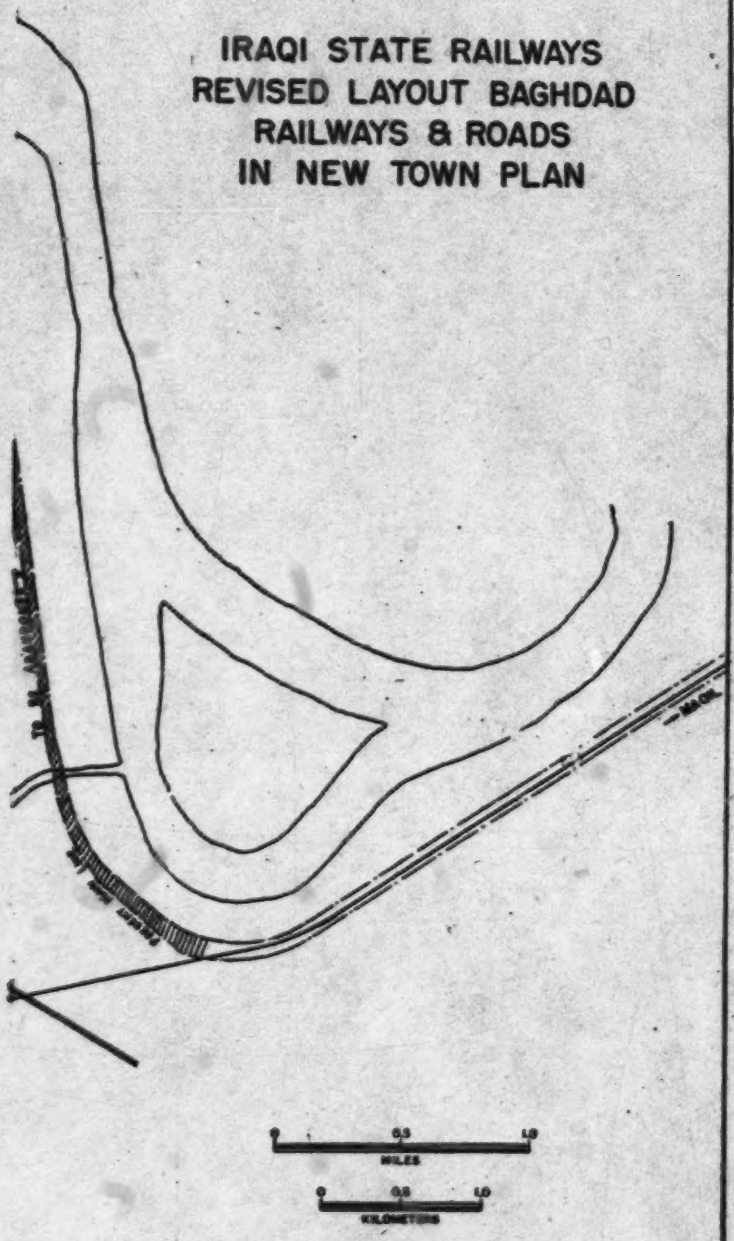
IRAQI STATE RAILWAYS
REVISED LAYOUT BAGHDAD
RAILWAYS & ROADS
IN NEW TOWN PLAN



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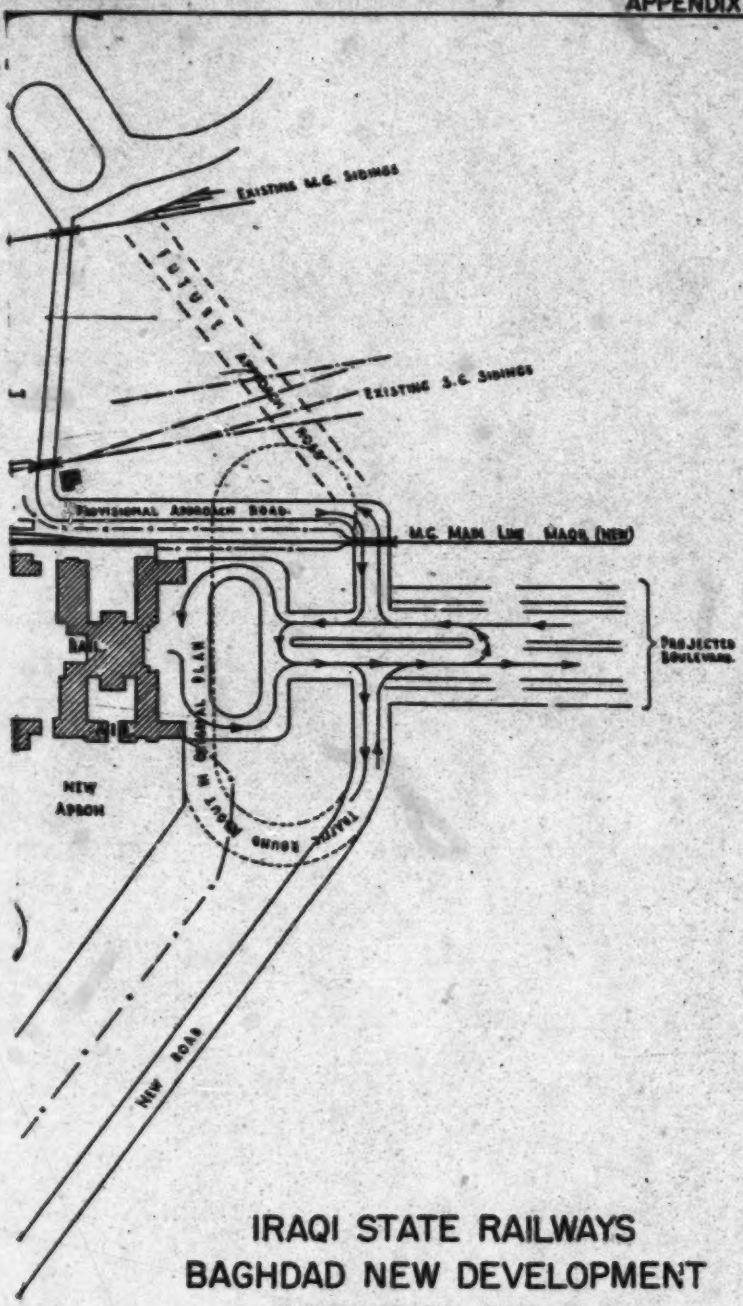

IRAQI STATE RAILWAYS
BAGHDAD NEW DEVELOPMENT
SIMPLIFIED STAGE I

FOLL. P. 343 (c)

7: International Bank N, S-4 (1951) 1952 MH1 Iraq MH1

APPENDIX D

Notes on Conversion from Meter to Standard Gauge of the Basra-Baghdad-Erbil Main Line and Branches

The conversion plan, if carried out, should establish an approximate D-day of conversion for the Basra-Baghdad line five years ahead and a second D-day of conversion for the Baghdad-Erbil line in the following year, i.e. in six years' time.

As a preliminary step there should be a careful survey of the number of tracks in yards, loops and sidings in stations which are unused or in excess of requirements, so that the conversion can be concentrated on tracks and sidings truly necessary. The conversion mileage can thereupon be determined.

A further preliminary step would involve a study of revised timetables, which take account of the new form of traction and the reduction in motive power units and rolling stock resulting therefrom.

The conversion will require the substitution of standard-gauge sleepers for the entire length of track to be converted from meter gauge. On certain sections this will involve broadening of the existing earth or stone ballast bed. On some bridges slight structural alterations to longitudinal girders may also be necessary. No other substitution or expansion is required for the conversion since any strengthening of the track by new rails, new turnouts, stone ballast or earth, etc., should properly be considered a replacement or development requirement, not a conversion requirement.

The conversion will also require the substitution of standard-gauge rolling stock for existing meter-gauge stock. New diesel locomotives will in any case be required by the change-over to diesel traction, and since carriage and wagon bodies have been built to standard-gauge dimension, the only change rolling stock conversions will require is the substitution of standard-gauge undercarriages for the existing meter-gauge. Any replacement, renewal or expansion of rolling stock carried out at the same time should be considered, therefore, a development rather than a conversion requirement.

7: International Bank N, S-4 (1951) 1952 MH1 Iraq MH1

The raising of platforms and loading bank levels may be considered a conversion requirement, but it is not an essential part of conversion, and it may, in most stations, be postponed or even dispensed with. Buildings, fencing, signalling, communications system, water supply, power plant and machinery are, for the most part, not directly affected by the conversion. To the limited extent that they may be affected, as in the case of machinery and stores, there is a reduction, rather than an expansion, involved.

The two D-days for conversion should be determined inside two successive years' seasons of low traffic. The conversion program before and on D-day, and the completion program after D-day are scheduled in outline in the following paragraphs.

Standard-gauge sleepers in the existing track scheduled for conversion after the survey prescribed earlier should be substituted for meter-gauge sleepers, over as long a period as practicable, well in advance of D-day. This can be done by the ordinary maintenance gangs, strengthened where required, in slack periods.

Special gangs or contractors, or both, should proceed to put out of service approximately half the number of sidings in the yards and wharves, etc., at Magil and Baghdad, and at the most important intermediate stations bring these to standard gauge. At each crossing station which has more than one crossing loop, one or more loops would be put out of service and similarly converted, including the turn-outs at either end, in or by the side of the track.

If agreement is reached on remodelling of the yards in Baghdad-West, the new yards will need to be built for standard gauge, leaving the abandonment of the meter-gauge yards until after the conversion.

Some days before D-day a proportion of the rail fastenings in the remaining track would be loosened, and key turnouts at entrances and exits to stations and yards built at the side of their final position.

On D-day the conversion would be carried out with might and main over the entire length of the line, joining the already converted halves of yards and at least one loop at crossing stations, all within an allowed space of not more than 24 hours.

7: International Bank N, S-4 (1951) 1952 MH1 Iraq MH1

The special gangs and contractors would then continue to convert the remaining halves of yards and loops and remove surplus sidings.

Rolling stock and locomotive requirements will have to be met as follows:

1. **Motive power.** Diesel engine types will have to be ordered forthwith for standard-gauge trial. After a suitable period of trials under all conditions and circumstances, including try-out of alterations resulting from the trials, the order for the full requirements must be placed so that delivery of the absolutely essential number of units can be made before the two D-days of conversion.

2. **New rolling stock.** No new rolling stock for meter-gauge lines should be ordered from the day the conversion is decided upon, and new units of coaching stock and wagons which would have been ordered under the meter-gauge renewal program will need to be ordered for standard gauge. The number should be increased so as to cover a renewal program of 10 years concentrated in a period of five years.

3. **Conversion of old rolling stock.** With due regard to the reduced number of coaching and wagon units as calculated by the preliminary survey, any deficiency remaining after the provisions outlined under paragraph 2, will have to be met by rebuilding of meter-gauge to standard-gauge stock from existing bodies on new undercarriages.

New standard-gauge rolling stock imported through Basra port should be held at Basra on the converted portions of wharves and yards in readiness for operation from D-day. Converted stock, handled at Baghdad workshops, plus the surplus now existing on the standard-gauge line, is to be similarly held ready at the Baghdad end.

Traffic must be interrupted for a few days before D-day, probably three days or less in the down direction and one day in the up direction. These days must be used to bring all meter-gauge stock, except the units to be sold or scrapped, under load or empty from Magil to Baghdad for use on the Erbil line. All units to be sold must be brought to Magil before D-day. This process will already have started several weeks before by a judiciously planned distribution operation. Both the public and the trade must be warned in advance so that traffic, though interrupted for a few days, need not suffer.

7: International Bank N, S-4 (1951) 1952 MH1 Iraq MH1

The same procedures, on a far smaller scale, would be repeated a year later on the Baghdad-Erbil line. In the planning arrangements outlined above the estimates of costs may be calculated in considerable detail.

The cost of conversion of track and accessories will consist of (1) the actual cost of labor, materials and supervisions involved in the operation of 800-plus miles of standard-gauge sleepers, less the cost of 10 years' replacement of meter-gauge sleepers and the scrap value of removed meter-gauge sleepers, and (2) the cost of widened earth or ballast section and of some structural alterations to bridges. The difference in cost between the 75-pound rails required for standard gauge and the 60-pound rails that would otherwise be used for renewals might also be included, although this item is not a real conversion cost. There is no doubt that developments in any case would demand heavier rail than 60-pounds even if the meter gauge is retained.

The conversion cost in terms of motive power and rolling stock will consist of (1) the difference in cost of standard-gauge and meter-gauge diesel locomotives; (2) the difference in cost of standard-gauge and meter-gauge coaching stock and wagons scheduled for renewal; and (3) the cost of extra standard-gauge rolling stock required to reach the numbers necessary for operation.

From the costs so calculated must be deducted the saving in new procurement resulting from the smaller numbers of locomotives, carriages and wagons as standard-gauge and former meter-gauge stocks are pooled. The resulting savings in maintenance and renewal costs will accrue over a period of 15 to 30 years during which old stock will be completely replaced by new stock.

Finally an attempt should be made to assess in some detail the savings in operation, maintenance, warehouses, stores and administration generally resulting from the conversion; also the saving in transshipment costs plus the increase in revenues from the larger traffic which will undoubtedly develop once transshipment has been abolished.

One further factor will affect the cost of rolling stock. Standard-gauge wagon stock should comply with the requirements of the European Wagons Union (RIV) but the designs should follow the existing simple standards of meter-gauge rolling stock.

7: International Bank N, S-4 (1951) 1952 MH1 Iraq MH1

446 The wagons of most European railways, including the present standard-gauge wagon stock of Iraq State Railways, are unnecessarily luxurious and far too heavy for Iraq's needs. The railways' traffic consists largely of smaller than bogie load consignments, and the four-wheeled wagon type should be retained in preference to a switch to bogies stock.

2₁ United Nations U-4 (no date) 1950 M1 Middle East
Iraq MH1

505 In 1947, the number of steam and motor boats fell slightly to 172 vessels with a total tonnage of 10,645 tons. On the other hand, the number of special motor boats for passenger transport increased to 388.

Railways

● 496 The railway network and railway transport in Iraq are not yet sufficiently developed; but the authorities are making considerable efforts to remedy this state of affairs.

[471] In 1902 the Germans obtained a concession for building the Istanbul—Baghdad railway line—the "Baghdad Bahn"—a project in keeping with the *Dràng nach Osten;* they began the work in 1903, but had only completed a few sections by the eve of the First World War. The work resumed under very different conditions after the First World War, and was completed in July 1940, when the Baiji—Mosul —Tel Kochek section was opened in the territory of Iraq.

[655] The Iraqi railway network, which is owned by the State, now consists of the following lines:

	Kilometres
496 (Standard gauge, 1.435 metres) Baghdad—Baiji—Mosul—Tel Kochek (to the Syrian frontier) ..	529.4[4]
(One-metre gauge) Baghdad—Kirkuk (323.4 km)—Erbil (111 km), with the Julula—Khanaqin branch (29 km)	463.4
(One-metre gauge) Baghdad—Ma'agil (548 km)—Basra town (9.6 km), with the Al Musaiyib—Karbala—Hindiya branch (50.5 km) Ur—Nasiriya (16.1 km), Shuiaiba—Az Zubair quarries (46.7 km)	690.9
Cross-overs and sidings (one-metre gauge): Baghdad-West—Baghdad-North (8 km), Baghdad-East—Moaskar Rashid (8 km)	16
	1,699.7

According to recent reliable information, the extension of the Baghdad—Kirkuk line to Erbil, an extension which is very important for the agriculture of that region and was far advanced in 1949, has already been completed. Much progress has also been made in constructing a railway line between Karbala and Najaf; a railway and road bridge across the Tigris at Baghdad, which will replace the existing ferry-boat between Baghdad-West and Baghdad-North (on the Baghdad—Kirkuk railway line); and a railway bridge across the Euphrates at Al Musaiyib, by the Hindiya Dam (on the Hindiya—Karbala section); the construction of a new railway station and engine shed at Baghdad has also been begun.

[4] Contrary to information from various sources, which give the length of this line as 329 (English) miles, recent information from authoritative sources gives the figur as 403.7 miles, or 649 kilometres; this would lead t the assumption that the Baghdad—Hindiya branch of thi line, which was built during the war, is still in use.

● 496 By contrast, various railway sections built during the war (Baquba—Kut-al-Imara, Tanua—Hashimiya) were abandoned or dismantled after the war.

497 The railway traffic is shown by the following table, in which the years refer to fiscal years beginning on 1 April of the year stated:

	Passenger-kilometres	*Freight net ton-kilometres*
	(in millions)	
1928	89	147
1932	144	156
1937	251	302
1942	566	814
1947	631	606

There is a daily passenger and goods service (in both directions) on the Basra—Baghdad—Kirkuk—Khanaqin line; the traffic between the railway centres and the inland markets of Iraq and Iran is carried by road.

In 1946, the rolling-stock consisted of 114 engines, 324 passenger carriages and 6,642 goods vans.

Road Network

491 The actual construction of a road network in Iraq was begun after the First World War. At present (these figures relate to the end of 1948), the country has 7,320 kilometres of road; these roads are inspected and maintained by the government and are made up as follows:

487 Land Communications with Foreign Countries

496 Iraq has direct connexions:

By *railway:* with Turkey, through Syria, the frontier station of Nusaybin, to Haidar Pasha (suburb of Istanbul, on the sea of Marmora, at the southern end of the Anatolian shore of the Bosporus); with Syria, where the Baghdad line intersects the Syrian line to Damascus near Aleppo; with Lebanon, through Syria, by the junction at Raiat with the Damascus—Beirut line, and at Homs with the Homs—Tell Kalakh—Tripoli—Beirut line; with the State of Israel, by the Damascus—Jordan line and the narrow-gauge Dera—Haifa branch line; with the Hashimite Kingdom of the Jordan, by the Damascus—Dera—Nassib—Amman—Maan line; with Egypt, by the Haifa—Rafah—Cairo railway; with Iran, from the terminus of the Trans-Iranian Railway at Khurramshahr, on the left bank of the Shatt al-Arab (24.4 kilometres from Basra), towards Ahwaz—Teheran—Bandar-Shah, on the Caspian Sea;

487 491 By *motor transport roads:* with Turkey, directly through Zakho, and through Syria, by the Mosul—Tel Kochek—Nusaybin—Diyarbekir roads; with Syria (and beyond) by the Mosul—Tel Kochek, Mosul—El Badi—Mineveh, Kirkuk—Haditha—Jalib-Akashe, Baghdad—Rutba—Tell Droite—Palmyra, and Baghdad—Rutba—Damascus roads; with Jordan: by the Baghdad—Ramadi—Rutba—Mafrak roads; with Saudi Arabia: by the Baghdad—Karbala—Nukhaib—Judaidal al Arar, and El Jauf

3cRoyal Institute of International Affairs U-4 (no date)1954 M1 Middle East
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Iraq each capable of manufacturing 10,000 tons of sugar per annum from sugar beet to be grown locally, a bitumen plant, and a small steel plant. In addition the Government is investigating the recommendation of the International Bank mission[1] for the erection of a chemical plant at Kirkuk to produce ammonium sulphate fertilizer, cement, sulphur, and carbon black. The mission has also recommended plants for manufacturing bone-meal fertilizer, date-packing crates and motor-car tyres, and for batching concrete, converting steel scrap into building components, and possibly for remelting glass.

Labour

Conditions of work and employment are regulated by a Labour Law (1936–46), which so far relates only to 'workmen' (a term requiring more precise definition) in industrial undertakings. It is in process of revision and extension. Its application is supervised by the Department of Labour and Social Security, which maintains a small corps of inspectors. This department, advised by foreign experts, proposes to experiment with employment exchanges, is starting to compile labour statistics, is undertaking a programme of housing for labour, and is examining plans of social security, for which the existing Labour Law already contains some provision in the form of indemnities on discharge, paid sick and confinement leave, and compensation for injuries. Safety and sanitary working conditions are covered generally by the Labour Law and made obligatory in greater detail by a Workshops and Factories Regulation (1937). In January 1953 it was stated that new provisions, for eventual inclusion in the new Labour Law, had been drafted for establishing wage boards, regulating disputes, and determining the rights, obligations, and administration of trade unions, which are not clearly defined in the existing Labour Law. The latter grants industrial workers the right to establish associations to safeguard their special interests, strengthen the spirit of co-operation, effect educational, cultural, hygienic, social, and moral improvements, and develop Iraqi industry. A few trade unions exist; their membership is small and activity slight. Others have been suspended for subversive activity. The movement is still rudimentary.

Communications

Railways.[2] The railways constructed by the British forces during the Mesopotamian Campaign eventually formed the

[1] See above, p. 275.
[2] This section is based on the *Directory of Railway Officials and Year Book*, 1952-3.

5: Harrison D-4 (1912-1924) 1924 M1 Middle East
Iraq MH1

try rather than fostering the development of something indigenous and natural. Under such a system the enforcement of law may become of necessity very mechanical, as when an Indian Sepoy nearly knocks down an inoffensive Arab pedestrian by a blow with his fist for no greater crime than walking on the wrong side of the road to avoid a mud puddle. In the courts, too, a crowd of lawyers and an abundance of red tape, with venal underlings, may serve to make the paths of justice tortuous and uncertain in spite of the best intentions on the part of the presiding judge.

Nevertheless, even under such handicaps as those we have indicated, there is no questioning the very great material progress that is to be seen in Mesopotamia. Even before the war one of Baghdad's streets was paved, and since the British have taken over the administration of the kingdom, all sorts of improvements have been introduced. The railroad system of the country now extends 360 miles from Basra to Baghdad and from there on nearly to Mosul. There are several subsidiary lines, the total amounting to over 1000 miles. By far the greater part of this mileage was constructed by the British for war purposes. Under British rule, also, the Hindiya Barrage and other less important irrigation works have been kept in order and improved and extensive harbor improvements at Basra undertaken.

British sanitary and health officers have been appointed for Mesopotamia and no praise is too high for their largely unappreciated but nevertheless unselfish and extremely efficient labors in that country. The hospital work that has been undertaken in Basra, Baghdad and Amara, the inspection of eating houses, and the maintaining of sanitary conditions have been excellently done.

pal population centers and radiate from Baghdad and Mosul to cities in Syria, Iran and Turkey. The Tigris is navigable to barges from Basra to Baghdad throughout the year, and to smaller craft as far as Mosul during the high-water season. The Shatt al Arab is open to ocean-going vessels, and Basra, about 85 miles from the Persian Gulf, is one of the major ports of the Middle East. A government-operated railroad, part of the famous "Berlin to Baghdad" railway, runs from Basra to Baghdad and Mosul, with connections through Aleppo to Istanbul. A branch line extends from Baghdad to Kirkuk, Erbil and Khanaquin. A government-owned airline serves Iraq and the neighboring countries, while international lines from Europe to Africa and the Far East stop at Baghdad and Basra.

489 491 505 496 509

Food and Nutrition

The nutrition of the people is governed by the cultural habits of the different racial and social communities, the economic status of the individual families and the food supplies available under diverse climatic conditions. Undernutrition is prevalent among the poorer inhabitants—tenant cultivators, urban laborers and nomadic tribes—who make up over three quarters of the population. Wheat, barley, rice and dates are the staple food crops of the country, while vegetables and fruits, other than dates, are frequently scarce. Wheat is widely grown, primarily in the rainfall areas of the north, but also in the irrigated riverain zones of the south. Barley is cultivated extensively, and, like wheat, is used in the preparation of breads and of *burghul*, a coarse-grained cereal product typical of this region. Millet and maize are common crops in the south. Rice is produced in certain lowland districts in the Kurdish highlands and on the fringes of the southern marshes, and is a popular food among all sections of the population. Peas, beans and lentils are usually consumed throughout the year, and tomatoes, eggplant and different root and green vege-

146 241 [262]

Chapter 4

IRAQ

Developments to the End of the Second World War

433 At the end of the First World War, when Iraq was constituted as a State, 312 very little had been done to develop its economy. An over-all irrigation 315 programme had been drawn up, and the Hindiyah barrage had been built on the Euphrates and work begun on the Habbaniyah escape channel, but the outbreak of war had interrupted progress. The war had also prevented the exploitation of oil deposits by the Turkish Petroleum Company, formed in 1914. In the nineteen twenties, development was started. The digging of canals, the building of minor [496] works and the installation of irrigation pumps resulted in a substantial increase in cultivation, and there was also a slight improvement in farming methods. Railways were extended and other means of transport improved.

436 Further steps were taken in the nineteen thirties. In 1932, instead of the 312 rupee, the Iraqi dinar became the unit of currency. The Kut barrage, on the 433 Tigris, and various canals, regulator dams and minor projects were completed. 652 The establishment of a few cotton gins, textile plants and other factories 423 producing consumer goods marked the beginning of modern industry. A government-owned Agricultural and Industrial Bank was set up. A land settlement law was passed in 1932 and amended in 1938, and work on land settlement began in 1933.

471 Of more importance to the Iraqi economy was the development of the petroleum 382 industry. In 1925, the Iraqi Petroleum Company, a successor to the Turkish 315 Petroleum Company, was granted a concession, and in 1927 the Kirkuk oilfield was 651 discovered. By 1934, that field had been brought into production, and two 652 pipelines, with an annual capacity of 2.2 million tons each, had been laid to the Mediterranean coast; these developments required an investment of $62 million. Exports of oil began that year. The royalties and other revenues from petroleum accruing to the Government greatly increased its receipts and made it possible to augment expenditure on economic and social development.

433 During the Second World War Allied troops stationed in Iraq spent large sums on local purchases; from 1941 to 1944 inclusive, these expenditures totalled £64 million. There was a corresponding increase in national income, expressed in monetary terms, and prices rose considerably, the wholesale price index reaching a peak of 590 in 1943 (December 1938 to August 1939 = 100) and standing at 503 in 1945. This addition to national income and rise in prices stimulated agriculture; the area under cultivation was considerably extended, by irrigation and greater use of farm machinery, and although yields declined, total output increased somewhat. The greater part of the Allied expenditures was saved, in the form of sterling balances, which, in July 1947, amounted to £57.9 million. 1/

1/ National Bank of Iraq, Annual Report, July 1949-December 1950 (Baghdad, 1951).